TAYLOR OILFIELD SERVICES


# MATERIAL SAFETY DATA SHEETS

REVISION 1 | JUNE 1, 2016

## SECTIONS

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3 Precision, Synthetic

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8 Methyl Hydrate

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14 RV Plumbing Antifreeze

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16 Traxon Synthetic Blend 75W90

17 TRAXON E SYNTHETIC CD-50

18 HYDREX XV ALL SEASON

19 Duratran Synthetic

20 Airbrake System Antifreeze

21 Enduratex Ep220

22 Windex

23 Lysol

24 Spray Nine

25 Armor All

26 Mr Clean All Purpose Cleaner

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

| | | |
|---|---|---|
| Product name | : | DIESEL FUEL |
| Synonyms | : | Seasonal Diesel, #1 Diesel, #2 Heating Oil, #1 Heating Oil, D50, Arctic Diesel, Farm Diesel, Marine Diesel, Low Sulphur Diesel, LSD, Ultra Low Sulphur Diesel, ULSD, Mining Diesel, Naval Distillate, Dyed Diesel, Marked Diesel, Coloured Diesel, Furnace special, Biodiesel blend, B1, B2, B5, Diesel Low Cloud (LC). Marine Gas Oil |
| Product code | : | 101802, 100107, 100668, 100658, 100911, 100663, 100652, 100460, 100065, 101796, 101793, 101795, 101792, 101794, 101791, 100768, 100643, 100642, 100103, 101798, 101800, 101797, 101788, 101789, 101787, 102531, 100734, 100733, 100640, 100997, 100995, 100732, 100731, 100994 |

Manufacturer or supplier's details

Petro-Canada
P.O. Box 2844, 150 - 6th Avenue South-West
Calgary Alberta T2P 3E3
Canada

| | | |
|---|---|---|
| Emergency telephone number | | Suncor Energy: +1 403-296-3000;<br>Poison Control Centre: Consult local telephone directory for emergency number(s). |

**Recommended use of the chemical and restrictions on use**

| | | |
|---|---|---|
| Recommended use | : | Diesel fuels are distillate fuels suitable for use in high and medium speed internal combustion engines of the compression ignition type. Mining diesels, marine diesels, MDO and naval distillates may have a higher flash point requirement. |
| Prepared by | : | Product Safety: +1 905-804-4752 |

## SECTION 2. HAZARDS IDENTIFICATION

**Emergency Overview**

| | |
|---|---|
| Appearance | Bright oily liquid. |
| Colour | Clear to yellow (This product may be dyed red for taxation purposes). |
| Odour | Mild petroleum oil like. |
| Hazard Summary | Combustible liquid.<br>May cause cancer.<br>Irritating to eyes and skin. |

**Potential Health Effects**

| | | |
|---|---|---|
| Primary Routes of Entry | : | Eye contact<br>Ingestion<br>Inhalation<br>Skin contact<br>Skin Absorption |
| Target Organs | : | Skin<br>Eyes<br>Respiratory Tract |
| Inhalation | : | May cause respiratory tract irritation.<br>Inhalation may cause central nervous system effects. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. |
| Skin | : | Causes skin irritation. |
| Eyes | : | Causes eye irritation. |
| Ingestion | : | Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.<br>Aspiration hazard if swallowed - can enter lungs and cause damage. |
| Aggravated Medical Condition | : | None known. |

**Carcinogenicity:**

| | |
|---|---|
| **IARC** | No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. |
| **ACGIH** | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. |

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

**Hazardous components**

| Chemical Name | CAS-No. | Concentration (%) |
|---|---|---|
| kerosine (petroleum), hydrodesulfurized | 64742-81-0 | 70 - 100 % |
| kerosine (petroleum) | 8008-20-6 | |
| fuels, diesel | 68334-30-5 | |
| fuel oil no. 2 | 68476-30-2 | |
| Alkanes, C10-20-branched and linear | 928771-01-1 | 0 - 25 % |
| Soybean oil, Methyl ester | 67784-80-9 | 0 - 5 % |
| Rape oil, Methyl ester | 73891-99-3 | |

| | | |
|---|---|---|
| Fatty acids, tallow, Methyl esters | 61788-61-2 | |

## SECTION 4. FIRST AID MEASURES

| | | |
|---|---|---|
| If inhaled | : | Move to fresh air.<br>Artificial respiration and/or oxygen may be necessary.<br>Seek medical advice. |
| In case of skin contact | : | In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.<br>Wash skin thoroughly with soap and water or use recognized skin cleanser.<br>Wash clothing before reuse.<br>Seek medical advice. |
| In case of eye contact | : | Remove contact lenses.<br>Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.<br>Obtain medical attention. |
| If swallowed | : | Rinse mouth with water.<br>DO NOT induce vomiting unless directed to do so by a physician or poison control center.<br>Never give anything by mouth to an unconscious person.<br>Seek medical advice. |
| Most important symptoms and effects, both acute and delayed | : | First aider needs to protect himself. |

## SECTION 5. FIREFIGHTING MEASURES

| | | |
|---|---|---|
| Suitable extinguishing media | : | Dry chemical<br>Carbon dioxide (CO2)<br>Water fog.<br>Foam |
| Unsuitable extinguishing media | : | Do NOT use water jet. |
| Specific hazards during firefighting | : | Cool closed containers exposed to fire with water spray. |
| Hazardous combustion products | : | Carbon oxides (CO, CO2), nitrogen oxides (NOx), sulphur oxides (SOx), sulphur compounds (H2S), smoke and irritating vapours as products of incomplete combustion. |
| Further information | : | Prevent fire extinguishing water from contaminating surface water or the ground water system. |
| Special protective equipment | : | Wear self-contained breathing apparatus for firefighting if |

for firefighters necessary.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.
Evacuate personnel to safe areas.
Material can create slippery conditions.

Environmental precautions : If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Prevent further leakage or spillage if safe to do so.
Remove all sources of ignition.
Soak up with inert absorbent material.
Non-sparking tools should be used.
Ensure adequate ventilation.
Contact the proper local authorities.

## SECTION 7. HANDLING AND STORAGE

Advice on safe handling : For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Use only with adequate ventilation.
In case of insufficient ventilation, wear suitable respiratory equipment.
Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity.
Avoid contact with skin, eyes and clothing.
Do not ingest.
Keep away from heat and sources of ignition.
Keep container closed when not in use.

Conditions for safe storage : Store in original container.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep in a dry, cool and well-ventilated place.
Keep in properly labelled containers.
To maintain product quality, do not store in heat or direct sunlight.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Components with workplace control parameters**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|---|---|---|---|---|
| kerosine (petroleum), | 64742-81-0 | TWA | 200 mg/m3 | ACGIH |

| | | | | |
|---|---|---|---|---|
| hydrodesulfurized | | | (As total hydrocarbon vapour) | |
| | | TWA | 200 mg/m3 (As total hydrocarbon vapour) | ACGIH |
| | | TWA | 200 mg/m3 (As total hydrocarbon vapour) | ACGIH |
| kerosine (petroleum) | 8008-20-6 | TWA | 200 mg/m3 (As total hydrocarbon vapour) | CA BC OEL |

**Engineering measures** : Use only in well-ventilated areas.
Ensure that eyewash station and safety shower are proximal to the work-station location.

**Personal protective equipment**

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Filter type : organic vapour cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited. Use a positive-pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

Hand protection

Material : neoprene, nitrile, polyvinyl alcohol (PVA), Viton(R). Consult your PPE provider for breakthrough times and the specific glove that is best for you based on your use patterns. It should be realized that eventually any material regardless of their imperviousness, will get permeated by chemicals. Therefore, protective gloves should be regularly checked for wear and tear. At the first signs of hardening and cracks, they should be changed.

Remarks : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eye protection : Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to

the specific work-place.

| | | |
|---|---|---|
| Protective measures | : | Wash contaminated clothing before re-use. |
| Hygiene measures | : | Remove and wash contaminated clothing and gloves, including the inside, before re-use.<br>Wash face, hands and any exposed skin thoroughly after handling. |

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|---|---|---|
| Appearance | : | Bright oily liquid. |
| Colour | : | Clear to yellow (This product may be dyed red for taxation purposes). |
| Odour | : | Mild petroleum oil like. |
| Odour Threshold | : | No data available |
| pH | : | No data available |
| Pour point | : | No data available |
| Boiling point/boiling range | : | 150 - 371 °C (302 - 700 °F) |
| Flash point | : | > 40 °C (104 °F)<br>Method: closed cup |
| Auto-Ignition Temperature | : | 225 °C (437 °F) |
| Evaporation rate | : | No data available |
| Flammability | : | Flammable in presence of open flames, sparks and heat. Vapours are heavier than air and may travel considerable distance to sources of ignition and flash back. This product can accumulate static charge and ignite. |
| Upper explosion limit | : | 6 %(V) |
| Lower explosion limit | : | 0.7 %(V) |
| Vapour pressure | : | 7.5 mmHg (20 °C / 68 °F) |
| Relative vapour density | : | 4.5 |
| Relative density | : | 0.8 - 0.88 |
| Solubility(ies) | | |
| Water solubility | : | insoluble |
| Partition coefficient: n-octanol/water | : | No data available |
| Viscosity | | |
| Viscosity, kinematic | : | 1.3 - 4.1 cSt (40 °C / 104 °F) |

| | | |
|---|---|---|
| Explosive properties | : | Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Runoff to sewer may create fire or explosion hazard. |

## SECTION 10. STABILITY AND REACTIVITY

| | | |
|---|---|---|
| Possibility of hazardous reactions | : | Hazardous polymerisation does not occur.<br>Stable under normal conditions. |
| Conditions to avoid | : | Extremes of temperature and direct sunlight. |
| Incompatible materials | : | Reactive with oxidising agents and acids. |
| Hazardous decomposition products | : | May release COx, NOx, SOx, H2S, smoke and irritating vapours when heated to decomposition. |

## SECTION 11. TOXICOLOGICAL INFORMATION

| | | |
|---|---|---|
| Information on likely routes of exposure | : | Eye contact<br>Ingestion<br>Inhalation<br>Skin contact<br>Skin Absorption |

**Acute toxicity**

**Product:**

| | | |
|---|---|---|
| Acute oral toxicity | : | Remarks: No data available |
| Acute inhalation toxicity | : | Remarks: No data available |
| Acute dermal toxicity | : | Remarks: No data available |

**Components:**

**kerosine (petroleum), hydrodesulfurized:**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 Rat: > 5,000 mg/kg, |
| Acute inhalation toxicity | : | LC50 Rat: > 5.2 mg/l<br>Exposure time: 4 hrs<br>Test atmosphere: dust/mist |
| Acute dermal toxicity | : | LD50 Rabbit: > 2,000 mg/kg, |

**kerosine (petroleum):**

| | | |
|---|---|---|
| Acute oral toxicity | : | LD50 Rat: > 5,000 mg/kg, |
| Acute inhalation toxicity | : | LC50 Rat: > 5 mg/l |

Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 Rabbit: > 2,000 mg/kg,

**fuels, diesel:**
Acute oral toxicity : LD50 Rat: 7,500 mg/kg,

Acute dermal toxicity : LD50 Mouse: 24,500 mg/kg,

**fuel oil no. 2:**
Acute oral toxicity : LD50 Rat: 12,000 mg/kg,

Acute inhalation toxicity : LC50 Rat: 4.1 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

**Skin corrosion/irritation**

**Product:**

Remarks: No data available

**Serious eye damage/eye irritation**

**Product:**

Remarks: No data available

**Respiratory or skin sensitisation**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**STOT - single exposure**

No data available

**STOT - repeated exposure**

No data available

**Aspiration toxicity**

No data available

## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

**Product:**

| | | |
|---|---|---|
| Toxicity to fish | : | Remarks: No data available |
| Toxicity to daphnia and other aquatic invertebrates | : | Remarks: No data available |
| Toxicity to algae | : | Remarks: No data available |
| Toxicity to bacteria | : | Remarks: No data available |

### Persistence and degradability

**Product:**

| | | |
|---|---|---|
| Biodegradability | : | Remarks: No data available |

### Bioaccumulative potential

No data available

### Mobility in soil

No data available

### Other adverse effects

No data available

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

| | | |
|---|---|---|
| Waste from residues | : | The product should not be allowed to enter drains, water courses or the soil.<br>Offer surplus and non-recyclable solutions to a licensed disposal company.<br>Waste must be classified and labelled prior to recycling or disposal.<br>Send to a licensed waste management company.<br>Dispose of as hazardous waste in compliance with local and national regulations.<br>Dispose of product residue in accordance with the instructions of the person responsible for waste disposal. |
| Contaminated packaging | : | Do not re-use empty containers. |

## SECTION 14. TRANSPORT INFORMATION

### International Regulation

**IATA-DGR**

| | | |
|---|---|---|
| UN/ID No. | : | 1202 |

| | | |
|---|---|---|
| Proper shipping name | : | Diesel fuel |
| Class | : | 3 |
| Packing group | : | III |
| Labels | : | 3 |
| Packing instruction (cargo aircraft) | : | 366 |

**IMDG-Code**

| | | |
|---|---|---|
| UN number | : | 1202 |
| Proper shipping name | : | DIESEL FUEL |
| Class | : | 3 |
| Packing group | : | III |
| Labels | : | 3 |
| EmS Code | : | F-E, S-E |
| Marine pollutant | : | no |

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**TDG**

| | | |
|---|---|---|
| UN number | : | 1202 |
| Proper shipping name | : | DIESEL FUEL |
| Class | : | 3 |
| Packing group | : | III |
| Labels | : | 3 |
| ERG Code | : | 128 |
| Marine pollutant | : | no |

**Special precautions for user**

Not applicable

## SECTION 15. REGULATORY INFORMATION

**WHMIS Classification** : B3: Combustible Liquid
D2A: Very Toxic Material Causing Other Toxic Effects
D2B: Toxic Material Causing Other Toxic Effects

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

**The components of this product are reported in the following inventories:**

| | |
|---|---|
| **DSL** | On the inventory, or in compliance with the inventory |
| **TSCA** | All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption. |
| **EINECS** | On the inventory, or in compliance with the inventory |

## SECTION 16. OTHER INFORMATION

For Copy of (M)SDS : Internet: www.petro-canada.ca/msds
Canada-wide: telephone: 1-800-668-0220; fax: 1-800-837-

1228
For Product Safety Information: 1 905-804-4752

Prepared by : Product Safety: +1 905-804-4752

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

| | | |
|---|---|---|
| Product name | : | GASOLINE, UNLEADED |
| Synonyms | : | Regular, Unleaded Gasoline (US Grade), Mid-Grade, Plus, Super, WinterGas, SummerGas, Supreme, SuperClean, SuperClean WinterGas, RegularClean, PlusClean, Premium, marked or dyed gasoline, TQRUL, transitional quality regular unleaded, BOB, Blendstock for Oxygenate Blending, Conventional Gasoline, RUL, MUL, SUL, PUL. |
| Product code | : | 100126, 101823, 100507, 101811, 101814, 100141, 101813, 101810, 101812, 100063, 101822, 100138, 101821, 100064, 101820, 101819, 100506, 101818, 101816, 101817, 100488 |

Manufacturer or supplier's details

Petro-Canada
P.O. Box 2844, 150 - 6th Avenue South-West
Calgary Alberta T2P 3E3
Canada

| | | |
|---|---|---|
| Emergency telephone number | | Suncor Energy: +1 403-296-3000;<br>Poison Control Centre: Consult local telephone directory for emergency number(s). |

**Recommended use of the chemical and restrictions on use**

| | | |
|---|---|---|
| Recommended use | : | Unleaded gasoline is used in spark ignition engines including motor vehicles, inboard and outboard boat engines, small engines such as chain saws and lawn mowers, and recreational vehicles. |
| Prepared by | : | Product Safety: +1 905-804-4752 |

## SECTION 2. HAZARDS IDENTIFICATION

**Emergency Overview**

| | |
|---|---|
| Appearance | Clear liquid. |
| Colour | Clear to slightly yellow or green, undyed liquid. May be dyed red for taxation purposes. |
| Odour | Gasoline |

**GHS Classification**

| | | |
|---|---|---|
| Flammable liquids | : | Category 1 |
| Skin irritation | : | Category 2 |
| Germ cell mutagenicity | : | Category 1B |

| | | |
|---|---|---|
| Carcinogenicity | : | Category 1A |
| Reproductive toxicity | : | Category 2 |
| Specific target organ toxicity - single exposure | : | Category 3 (Central nervous system) |
| Specific target organ toxicity - repeated exposure | : | Category 1 |
| Aspiration hazard | : | Category 1 |

**GHS Label element**

Hazard pictograms :

Signal word : Danger

Hazard statements : H224 Extremely flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H340 May cause genetic defects.
H350 May cause cancer.
H361 Suspected of damaging fertility or the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ eye protection/ face protection.
P281 Use personal protective equipment as required.
**Response:**
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a

POISON CENTER or doctor/ physician if you feel unwell.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P331 Do NOT induce vomiting.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
**Storage:**
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
**Disposal:**
P501 Dispose of contents/ container to an approved waste disposal plant.

**Potential Health Effects**

| | | |
|---|---|---|
| Primary Routes of Entry | : | Eye contact<br>Ingestion<br>Inhalation<br>Skin contact |
| Target Organs | : | Blood<br>Immune system |
| Inhalation | : | Inhalation may cause central nervous system effects. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. |
| Skin | : | May irritate skin. |
| Eyes | : | May irritate eyes. |
| Ingestion | : | Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.<br>Aspiration hazard if swallowed - can enter lungs and cause damage. |
| Chronic Exposure | : | Chronic exposure to benzene may result in increased risk of leukemia and other blood disorders. |
| Aggravated Medical Condition | : | None known. |

**Carcinogenicity:**

| | | |
|---|---|---|
| **IARC** | Group 1: Carcinogenic to humans | |
| | Benzene | 71-43-2 |
| **ACGIH** | Confirmed human carcinogen | |
| | Benzene | 71-43-2 |

| | | |
|---|---|---|
| | Confirmed animal carcinogen with unknown relevance to humans | |
| | Ethanol | 64-17-5 |
| | Gasoline, natural | 8006-61-9 |
| **OSHA** | OSHA specifically regulated carcinogen | |
| | Benzene | 71-43-2 |
| **NTP** | Known to be human carcinogen | |
| | Benzene | 71-43-2 |

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

**Hazardous components**

| Chemical Name | CAS-No. | Concentration (%) |
|---|---|---|
| gasoline, natural | 8006-61-9 | 95 - 100 % |
| toluene | 108-88-3 | 1 - 40 % |
| benzene | 71-43-2 | 0.5 - 1.5 % |
| ethanol | 64-17-5 | 0.1 - 0.3 % |

## SECTION 4. FIRST AID MEASURES

If inhaled : Artificial respiration and/or oxygen may be necessary.
Move to fresh air.
Seek medical advice.

In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Wash skin thoroughly with soap and water or use recognized skin cleanser.
Wash clothing before reuse.
Seek medical advice.

In case of eye contact : Remove contact lenses.
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Obtain medical attention.

If swallowed : Rinse mouth with water.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.
Never give anything by mouth to an unconscious person.

Seek medical advice.

| | | |
|---|---|---|
| Most important symptoms and effects, both acute and delayed | : | First aider needs to protect himself. |

## SECTION 5. FIREFIGHTING MEASURES

| | | |
|---|---|---|
| Suitable extinguishing media | : | Dry chemical<br>Carbon dioxide (CO2)<br>Water fog.<br>Foam |
| Unsuitable extinguishing media | : | Do NOT use water jet. |
| Specific hazards during firefighting | : | Cool closed containers exposed to fire with water spray. |
| Hazardous combustion products | : | Carbon oxides (CO, CO2), nitrogen oxides (NOx), polynuclear aromatic hydrocarbons, phenols, aldehydes, ketones, smoke and irritating vapours as products of incomplete combustion. |
| Further information | : | Prevent fire extinguishing water from contaminating surface water or the ground water system. |

## SECTION 6. ACCIDENTAL RELEASE MEASURES

| | | |
|---|---|---|
| Personal precautions, protective equipment and emergency procedures | : | Use personal protective equipment.<br>Ensure adequate ventilation.<br>Evacuate personnel to safe areas.<br>Material can create slippery conditions. |
| Environmental precautions | : | If the product contaminates rivers and lakes or drains inform respective authorities. |
| Methods and materials for containment and cleaning up | : | Prevent further leakage or spillage if safe to do so.<br>Remove all sources of ignition.<br>Soak up with inert absorbent material.<br>Non-sparking tools should be used.<br>Ensure adequate ventilation.<br>Contact the proper local authorities. |

## SECTION 7. HANDLING AND STORAGE

| | | |
|---|---|---|
| Advice on safe handling | : | For personal protection see section 8.<br>Smoking, eating and drinking should be prohibited in the application area.<br>Use only with adequate ventilation.<br>In case of insufficient ventilation, wear suitable respiratory equipment.<br>Avoid spark promoters. Ground/bond container and |

equipment. These alone may be insufficient to remove static electricity.
Avoid contact with skin, eyes and clothing.
Do not ingest.
Keep away from heat and sources of ignition.
Keep container closed when not in use.

Conditions for safe storage : Store in original container.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep in a dry, cool and well-ventilated place.
Keep in properly labelled containers.
To maintain product quality, do not store in heat or direct sunlight.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Components with workplace control parameters**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|---|---|---|---|---|
| | | TWA | 300 ppm<br>900 mg/m3 | OSHA P0 |
| | | STEL | 500 ppm<br>1,500 mg/m3 | OSHA P0 |
| | | TWA | 500 ppm<br>2,000 mg/m3 | OSHA Z-1 |
| toluene | 108-88-3 | TWA | 20 ppm | ACGIH |
| | | TWA | 100 ppm<br>375 mg/m3 | NIOSH REL |
| | | ST | 150 ppm<br>560 mg/m3 | NIOSH REL |
| | | TWA | 200 ppm | OSHA Z-2 |
| | | CEIL | 300 ppm | OSHA Z-2 |
| | | Peak | 500 ppm | OSHA Z-2 |
| | | TWA | 100 ppm<br>375 mg/m3 | OSHA P0 |
| | | STEL | 150 ppm<br>560 mg/m3 | OSHA P0 |
| benzene | 71-43-2 | TWA | 0.5 ppm | ACGIH |
| | | STEL | 2.5 ppm | ACGIH |
| | | TWA | 0.1 ppm | NIOSH REL |
| | | ST | 1 ppm | NIOSH REL |
| | | TWA | 10 ppm | OSHA Z-2 |
| | | CEIL | 25 ppm | OSHA Z-2 |
| | | Peak | 50 ppm | OSHA Z-2 |
| | | PEL | 1 ppm | OSHA CARC |
| | | STEL | 5 ppm | OSHA CARC |
| ethanol | 64-17-5 | TWA | 1,000 ppm<br>1,900 mg/m3 | NIOSH REL |
| | | TWA | 1,000 ppm<br>1,900 mg/m3 | OSHA Z-1 |

| | | | | |
|---|---|---|---|---|
| | | TWA | 1,000 ppm<br>1,900 mg/m3 | OSHA P0 |
| | | STEL | 1,000 ppm | ACGIH |

**Biological occupational exposure limits**

| Component | CAS-No. | Control parameters | Biological specimen | Sampling time | Permissible concentration | Basis |
|---|---|---|---|---|---|---|
| Toluene | 108-88-3 | Toluene | In blood | Prior to last shift of workweek | 0.02 mg/l | ACGIH BEI |
| Toluene | | Toluene | Urine | End of shift (As soon as possible after exposure ceases) | 0.03 mg/l | ACGIH BEI |

**Engineering measures** : Use only in well-ventilated areas.
Ensure that eyewash station and safety shower are proximal to the work-station location.

**Personal protective equipment**

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Filter type : A NIOSH-approved air-purifying respirator with an organic vapour cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited. Use a positive-pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

Hand protection

Material : polyvinyl alcohol (PVA), Viton(R). Consult your PPE provider for breakthrough times and the specific glove that is best for you based on your use patterns. It should be realized that eventually any material regardless of their imperviousness, will get permeated by chemicals. Therefore, protective gloves should be regularly checked for wear and tear. At the first signs of hardening and cracks, they should be changed.

Remarks : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

| | | |
|---|---|---|
| Eye protection | : | Wear face-shield and protective suit for abnormal processing problems. |
| Skin and body protection | : | Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. |
| Protective measures | : | Wash contaminated clothing before re-use. |
| Hygiene measures | : | Remove and wash contaminated clothing and gloves, including the inside, before re-use.<br>Wash face, hands and any exposed skin thoroughly after handling. |

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|---|---|---|
| Appearance | : | Clear liquid. |
| Colour | : | Clear to slightly yellow or green, undyed liquid. May be dyed red for taxation purposes. |
| Odour | : | Gasoline |
| Odour Threshold | : | No data available |
| pH | : | No data available |
| Pour point | : | No data available |
| Boiling point/boiling range | : | 25 - 225 °C (77 - 437 °F) |
| Flash point | : | -50 - -38 °C (-58 - -36 °F)<br>Method: Tagliabue. |
| Auto-Ignition Temperature | : | 257 °C (495 °F) |
| Evaporation rate | : | No data available |
| Flammability | : | Extremely flammable in presence of open flames, sparks, shocks, and heat. Vapours are heavier than air and may travel considerable distance to sources of ignition and flash back. Rapid escape of vapour may generate static charge causing ignition. May accumulate in confined spaces. |
| Upper explosion limit | : | 7.6 %(V) |
| Lower explosion limit | : | 1.3 %(V) |
| Vapour pressure | : | < 802.5 mmHg (20 °C / 68 °F) |
| Relative vapour density | : | 3 |
| Relative density | : | 0.685 - 0.8 |
| Solubility(ies) | | |

| | | |
|---|---|---|
| Water solubility | : | insoluble |
| Partition coefficient: n-octanol/water | : | No data available |
| Viscosity | | |
| Explosive properties | : | Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Containers may explode in heat of fire. Vapours may form explosive mixtures with air. |

## SECTION 10. STABILITY AND REACTIVITY

| | | |
|---|---|---|
| Possibility of hazardous reactions | : | Hazardous polymerisation does not occur.<br>Stable under normal conditions. |
| Conditions to avoid | : | Extremes of temperature and direct sunlight. |
| Incompatible materials | : | Reactive with oxidising agents, acids and interhalogens. |
| Hazardous decomposition products | : | May release COx, NOx, phenols, polycyclic aromatic hydrocarbons, aldehydes, ketones, smoke and irritating vapours when heated to decomposition. |

## SECTION 11. TOXICOLOGICAL INFORMATION

| | |
|---|---|
| Information on likely routes of exposure | Eye contact<br>Ingestion<br>Inhalation<br>Skin contact |

**Acute toxicity**

**Product:**

| | |
|---|---|
| Acute oral toxicity | Remarks: No data available |
| Acute inhalation toxicity | Remarks: No data available |
| Acute dermal toxicity | Remarks: No data available |

**Components:**

**toluene:**

| | |
|---|---|
| Acute oral toxicity | LD50 (Rat): 5,580 mg/kg |
| Acute inhalation toxicity | LC50 (Rat): 7585 ppm<br>Exposure time: 4 h<br>Test atmosphere: dust/mist |
| Acute dermal toxicity | LD50 (Rabbit): 12,125 mg/kg |

**benzene:**

| | |
|---|---|
| Acute oral toxicity | LD50 (Rat): 2,990 mg/kg |
| Acute inhalation toxicity | LC50 (Rat): 13700 ppm<br>Exposure time: 4 h<br>Test atmosphere: dust/mist |
| Acute dermal toxicity | LD50 (Rabbit): > 8,240 mg/kg |

**ethanol:**

| | |
|---|---|
| Acute oral toxicity | LD50 (Rat): 7,060 mg/kg |
| Acute inhalation toxicity | LC50 (Rat): > 32380 ppm<br>Exposure time: 4 h<br>Test atmosphere: vapour |

**Skin corrosion/irritation**

**Product:**

Remarks: No data available

**Components:**

**toluene:**

Result: Moderate skin irritant

**benzene:**

Result: Moderate skin irritant

**ethanol:**

Result: Skin irritation

**Serious eye damage/eye irritation**

**Product:**

Remarks: No data available

**Components:**

**toluene:**

Result: Mild eye irritation

**benzene:**

Result: Moderate eye irritation

**ethanol:**

Result: Eye irritation

**Respiratory or skin sensitisation**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**STOT - single exposure**

No data available

**STOT - repeated exposure**

No data available

## SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Product:**

| | | |
|---|---|---|
| Toxicity to fish | : | Remarks: No data available |
| Toxicity to daphnia and other aquatic invertebrates | : | Remarks: No data available |
| Toxicity to algae | : | Remarks: No data available |
| Toxicity to bacteria | : | Remarks: No data available |

**Persistence and degradability**

**Product:**

| | | |
|---|---|---|
| Biodegradability | : | Remarks: No data available |

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Other adverse effects**

No data available

## SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal methods**

| | | |
|---|---|---|
| Waste from residues | : | The product should not be allowed to enter drains, water courses or the soil.<br>Offer surplus and non-recyclable solutions to a licensed disposal company.<br>Waste must be classified and labelled prior to recycling or disposal.<br>Send to a licensed waste management company.<br>Dispose of as hazardous waste in compliance with local and national regulations.<br>Dispose of product residue in accordance with the instructions of the person responsible for waste disposal. |

Contaminated packaging : Do not re-use empty containers.

## SECTION 14. TRANSPORT INFORMATION

### International Regulation

**IATA-DGR**

| | | |
|---|---|---|
| UN/ID No. | : | 1203 |
| Proper shipping name | : | Gasoline |
| Class | : | 3 |
| Packing group | : | II |
| Labels | : | 3 |
| Packing instruction (cargo aircraft) | : | 364 |

**IMDG-Code**

| | | |
|---|---|---|
| UN number | : | 1203 |
| Proper shipping name | : | GASOLINE |
| Class | : | 3 |
| Packing group | : | II |
| Labels | : | 3 |
| EmS Code | : | F-E, S-E |
| Marine pollutant | : | no |

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

**49 CFR**

| | | |
|---|---|---|
| UN/ID/NA number | : | 1203 |
| Proper shipping name | : | Gasoline |
| Class | : | 3 |
| Packing group | : | II |
| Labels | : | 3 |
| ERG Code | : | 128 |
| Marine pollutant | : | no |

### Special precautions for user

Not applicable

## SECTION 15. REGULATORY INFORMATION

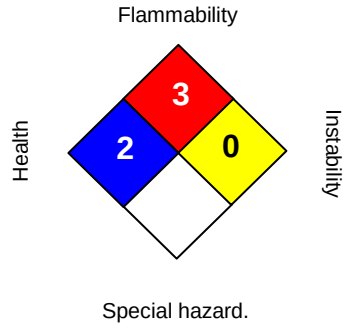
**The components of this product are reported in the following inventories:**

| | |
|---|---|
| **DSL** | On the inventory, or in compliance with the inventory |
| **TSCA** | All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption. |
| **EINECS** | On the inventory, or in compliance with the inventory |

## SECTION 16. OTHER INFORMATION

### Further information

**NFPA:**




**HMIS III:**

| | |
|---|---|
| HEALTH | 2* |
| FLAMMABILITY | 3 |
| PHYSICAL HAZARD | 0 |
| PERSONAL PROTECTION | H |

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

For Copy of (M)SDS : Internet: www.petro-canada.ca/msds
Canada-wide: telephone: 1-800-668-0220; fax: 1-800-837-1228
For Product Safety Information: 1 905-804-4752

Prepared by : Product Safety: +1 905-804-4752

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

29 CFR 1910.1200 (OSHA HazCom 2012)

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

**Product identifier**

Trade name : NAPA® PREM PERF SYN SAE 5W-30 SYNTHETIC MOTOR OIL

**Recommended use of the chemical and restrictions on use**

| **Details of the supplier of the safety data sheet** | **Emergency telephone number** |
|---|---|
| Ashland<br>P.O. Box 2219<br>Columbus, OH 43216<br>United States of America<br><br>EHS Customer Requests@ashland.com | 1-800-ASHLAND (1-800-274-5263)<br><br>**Regulatory Information Number**<br>1-800-325-3751<br><br>**Product Information**<br>614-790-3333 |

## SECTION 2. HAZARDS IDENTIFICATION

**GHS Classification**

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

**GHS Label element**

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

**Other hazards**

None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

**Hazardous components**

| Chemical Name | CAS-No. | Classification | Concentration (%) |
|---|---|---|---|
| HEAVY PARAFFINIC DISTILLATE | 64742-54-7 | Asp. Tox. 1; H304 | 26.23 |

| | | | |
|---|---|---|---|
| Benzenesulfonic acid, C10-60-alkyl derivs., sodium salts | 90194-32-4 | Eye Irrit. 2A; H319 | 6.22 |

## SECTION 4. FIRST AID MEASURES

General advice : No hazards which require special first aid measures.

If inhaled : If breathed in, move person into fresh air.
If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact : First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.

In case of eye contact : Remove contact lenses.
Protect unharmed eye.

If swallowed : Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed : Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.
Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:
acne
stomach or intestinal upset (nausea, vomiting, diarrhea)
irritation (nose, throat, airways)

Notes to physician : No hazards which require special first aid measures.

## SECTION 5. FIREFIGHTING MEASURES

| | | |
|---|---|---|
| Suitable extinguishing media | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.<br>Water spray<br>Foam<br>Carbon dioxide (CO2)<br>Dry chemical |
| Specific hazards during firefighting | : | Do not allow run-off from fire fighting to enter drains or water courses. |
| Hazardous combustion products | : | carbon dioxide and carbon monoxide<br>Hydrocarbons |
| Specific extinguishing methods | : | Product is compatible with standard fire-fighting agents. |
| Further information | : | Standard procedure for chemical fires. |
| Special protective equipment for firefighters | : | In the event of fire, wear self-contained breathing apparatus. |

## SECTION 6. ACCIDENTAL RELEASE MEASURES

| | | |
|---|---|---|
| Personal precautions, protective equipment and emergency procedures | : | Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. |
| Environmental precautions | : | Prevent further leakage or spillage if safe to do so. |
| Methods and materials for containment and cleaning up | : | Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).<br>Keep in suitable, closed containers for disposal. |
| Other information | : | Comply with all applicable federal, state, and local regulations. |

## SECTION 7. HANDLING AND STORAGE

| | | |
|---|---|---|
| Advice on safe handling | : | Smoking, eating and drinking should be prohibited in the application area.<br>For personal protection see section 8. |
| Conditions for safe storage | : | Electrical installations / working materials must comply with the technological safety standards. |
| Materials to avoid | : | No materials to be especially mentioned. |

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Components with workplace control parameters**

**Engineering measures** : General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

**Personal protective equipment**

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear as appropriate:
Safety shoes
Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : General industrial hygiene practice.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : liquid

Colour : amber

Odour : mild

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : 626 °F / 330 °C
(1,013.333333 hPa)
Calculated Phase Transition Liquid/Gas

Flash point : > 390 °F / > 199 °C
Method: Cleveland open cup

Evaporation rate : No data available

Flammability (solid, gas) : No data available

| | | |
|---|---|---|
| Upper explosion limit | : | 6 %(V)<br>Calculated Explosive Limit |
| Lower explosion limit | : | 1 %(V)<br>Calculated Explosive Limit |
| Vapour pressure | : | 1.3333333 hPa (20 °C)<br>Calculated Vapor Pressure |
| Relative vapour density | : | No data available |
| Relative density | : | No data available |
| Density | : | 0.8473 g/cm3 |
| Solubility(ies) | | |
| Water solubility | : | No data available |
| Solubility in other solvents | : | No data available |
| Partition coefficient: n-octanol/water | : | No data available |
| Thermal decomposition | : | No data available |
| Viscosity | | |
| Viscosity, dynamic | : | No data available |
| Viscosity, kinematic | : | 63.17 mm2/s (40 °C) |
| Oxidizing properties | : | No data available |

## SECTION 10. STABILITY AND REACTIVITY

| | | |
|---|---|---|
| Reactivity | : | No decomposition if stored and applied as directed. |
| Chemical stability | : | Stable under recommended storage conditions. |
| Possibility of hazardous reactions | : | Product will not undergo hazardous polymerization. |
| Incompatible materials | : | Strong oxidizing agents |
| Hazardous decomposition products | | carbon dioxide and carbon monoxide<br>Hydrocarbons |

## SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation
Skin contact
Eye Contact
Ingestion

**Acute toxicity**
Not classified based on available information.
**Components:**
HEAVY PARAFFINIC DISTILLATE**:**
Acute oral toxicity : LD 50 (Rat): > 15 g/kg

Acute dermal toxicity : LD 50 (Rabbit): > 5 g/kg

**Skin corrosion/irritation**
Not classified based on available information.
**Product:**
Result: Repeated exposure may cause skin dryness or cracking.

**Components:**
HEAVY PARAFFINIC DISTILLATE**:**
Result: Mildly irritating to skin

Benzenesulfonic acid, C10-60-alkyl derivs., sodium salts**:**
Result: Not irritating to skin

**Serious eye damage/eye irritation**
Not classified based on available information.
**Product:**
Remarks: Unlikely to cause eye irritation or injury.

**Components:**
HEAVY PARAFFINIC DISTILLATE**:**
Result: Not irritating to eyes

Benzenesulfonic acid, C10-60-alkyl derivs., sodium salts**:**
Result: Irritating to eyes

**Respiratory or skin sensitisation**
Skin sensitisation: Not classified based on available information.
Respiratory sensitisation: Not classified based on available information.
**Germ cell mutagenicity**
Not classified based on available information.
**Carcinogenicity**
Not classified based on available information.
**Reproductive toxicity**
Not classified based on available information.
**STOT - single exposure**
Not classified based on available information.
**STOT - repeated exposure**
Not classified based on available information.
**Aspiration toxicity**
Not classified based on available information.

**Product:**
No aspiration toxicity classification

**Components:**
HEAVY PARAFFINIC DISTILLATE**:**
May be fatal if swallowed and enters airways.

**Further information**
**Product:**
Remarks: No data available

**Carcinogenicity:**

| | |
|---|---|
| **IARC** | No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. |
| **OSHA** | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. |
| **NTP** | No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. |

## SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Components:**
HEAVY PARAFFINIC DISTILLATE**:**

| | | |
|---|---|---|
| Toxicity to fish | : | LL50 (Fish): > 100 mg/l |
| Toxicity to daphnia and other aquatic invertebrates | : | EL50 (Aquatic invertebrates): > 10,000 mg/l |
| Toxicity to algae | : | EL50 (Algae, algal mat (Algae)): > 100 mg/l |
| Toxicity to fish (Chronic toxicity) | : | NOEC (Fish): 10 mg/l |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC (Aquatic invertebrates): 10 mg/l |

**Persistence and degradability**

**Components:**
No data available

**Bioaccumulative potential**

**Components:**

No data available

**Mobility in soil**

**Components:**

No data available

**Other adverse effects**

No data available

**Product:**

Additional ecological information : No data available

**Components:**

## SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal methods**

General advice : Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents.

## SECTION 14. TRANSPORT INFORMATION

**International transport regulations**

**REGULATION**

| ID NUMBER | PROPER SHIPPING NAME | *HAZARD CLASS | SUBSIDIARY HAZARDS | PACKING GROUP | MARINE POLLUTANT / LTD. QTY. |
|---|---|---|---|---|---|

**U.S. DOT - ROAD**

Not dangerous goods

**U.S. DOT - RAIL**

Not dangerous goods

**U.S. DOT - INLAND WATERWAYS**

Not dangerous goods

**TRANSPORT CANADA - ROAD**

Not dangerous goods

**TRANSPORT CANADA - RAIL**

| Not dangerous goods |
|---|

**TRANSPORT CANADA - INLAND WATERWAYS**

| Not dangerous goods |
|---|

**INTERNATIONAL MARITIME DANGEROUS GOODS**

| Not dangerous goods |
|---|

**INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO**

| Not dangerous goods |
|---|

**INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER**

| Not dangerous goods |
|---|

**MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES**

| Not dangerous goods |
|---|

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

| | | |
|---|---|---|
| Marine pollutant | | no |

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

## SECTION 15. REGULATORY INFORMATION

**SARA 311/312 Hazards** : No SARA Hazards

**SARA 313**
**Component(s)SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**Pennsylvania Right To Know**

| | | |
|---|---|---|
| HYDROTREATED HEAVY PARAFFINIC BASE OIL | 64742-54-7 | 50.00 - 70.00 % |
| HEAVY PARAFFINIC DISTILLATE | 64742-54-7 | 20.00 - 30.00 % |

| | | |
|---|---|---|
| HEAVY PARAFFINIC DISTILLATE | 64742-54-7 | 5.00 - 10.00 % |
| Benzenesulfonic acid, C10-60-alkyl derivs., sodium salts | 90194-32-4 | 5.00 - 10.00 % |

**New Jersey Right To Know**

| | | |
|---|---|---|
| HYDROTREATED HEAVY PARAFFINIC BASE OIL | 64742-54-7 | 50.00 - 70.00 % |
| HEAVY PARAFFINIC DISTILLATE | 64742-54-7 | 20.00 - 30.00 % |
| HEAVY PARAFFINIC DISTILLATE | 64742-54-7 | 5.00 - 10.00 % |
| Benzenesulfonic acid, C10-60-alkyl derivs., sodium salts | 90194-32-4 | 5.00 - 10.00 % |
| LUBRICANT ADDITIVE | Not Assigned | 1.00 - 5.00 % |

**California Prop 65** Proposition 65 warnings are not required for this product based on the results of a risk assessment.

**The components of this product are reported in the following inventories:**

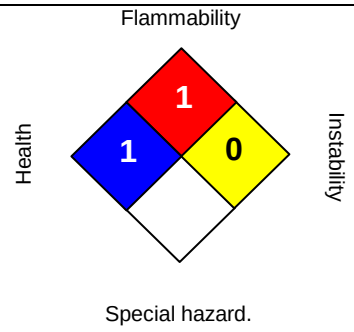
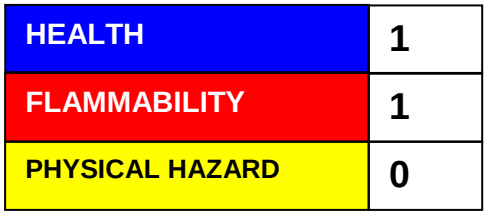
| | | |
|---|---|---|
| TSCA | : | On TSCA Inventory |
| DSL | : | All components of this product are on the Canadian DSL. |
| AUSTR | : | On the inventory, or in compliance with the inventory |
| ENCS | : | Contact your sales representative for additional information. |
| KECL | : | On the inventory, or in compliance with the inventory |
| PICCS | : | On the inventory, or in compliance with the inventory |
| IECSC | : | q (quantity restricted) |

**Inventories**

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

## SECTION 16. OTHER INFORMATION

**Further information**
Revision Date: 05/23/2015

| NFPA: | HMIS III: |
|---|---|
|  |  |





0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

**NFPA Flammable and Combustible Liquids Classification**
Combustible Liquid Class IIIB

**Full text of H-Statements referred to under sections 2 and 3.**

| | |
|---|---|
| H304 | May be fatal if swallowed and enters airways. |
| H319 | Causes serious eye irritation. |

Sources of key data used to compile the Safety Data Sheet
Ashland internal data including own and sponsored test reports
The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :
ACGIH : American Conference of Industrial Hygienists
BEI : Biological Exposure Index
CAS : Chemical Abstracts Service (Division of the American Chemical Society).
CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
FG : Food grade
GHS : Globally Harmonized System of Classification and Labeling of Chemicals.
H-statement : Hazard Statement

IATA : International Air Transport Association.
IATA-DGR : Dangerous Goods Regulation by the “International Air Transport Association” (IATA).

ICAO : International Civil Aviation Organization
ICAO-TI (ICAO) : Technical Instructions by the “International Civil Aviation Organization”
IMDG : International Maritime Code for Dangerous Goods
ISO : International Organization for Standardization
logPow : octanol-water partition coefficient
LCxx : Lethal Concentration, for xx percent of test population
LDxx : Lethal Dose, for xx percent of test population.
ICxx : Inhibitory Concentration for xx of a substance
Ecxx : Effective Concentration of xx
N.O.S.: Not Otherwise Specified
OECD : Organization for Economic Co-operation and Development
OEL : Occupational Exposure Limit
P-Statement : Precautionary Statement
PBT : Persistent , Bioaccumulative and Toxic
PPE : Personal Protective Equipment
STEL : Short-term exposure limit
STOT : Specific Target Organ Toxicity
TLV : Threshold Limit Value
TWA : Time-weighted average
vPvB : Very Persistent and Very Bioaccumulative
WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
DOT : Department of Transportation
FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
HMIRC : Hazardous Materials Information Review Commission
HMIS : Hazardous Materials Identification System
NFPA : National Fire Protection Association
NIOSH : National Institute for Occupational Safety and Health
OSHA : Occupational Safety and Health Administration
PMRA : Health Canada Pest Management Regulatory Agency
RTK : Right to Know
WHMIS : Workplace Hazardous Materials Information System

# Material Safety Data Sheet

# DURON TM/MC -E SYNTHETIC 0W-40

**000003000944**

Version 3.0 Revision Date 2015/02/03 Print Date 2015/02/03

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

| | | |
|---|---|---|
| Product name | : | DURON TM/MC -E SYNTHETIC 0W-40 |
| Product code | : | DESYN04P20, DESYN04IBC, DESYN04DRM, DESYN04DCT, DESYN04C16, DESYN04, DESYN04BLK |

Manufacturer or supplier's details

Petro-Canada Lubricants Inc.
2310 Lakeshore Road West
Mississauga ON L5J 1K2
Canada

Emergency telephone number: Suncor Energy: +1 403-296-3000;
Poison Control Centre: Consult local telephone directory for emergency number(s).

**Recommended use of the chemical and restrictions on use**

Recommended use : A high quality heavy duty engine oil specifically designed for low temperature operation and '07 EPA engine requirements, along with improved performance benefits in legacy engines. Application includes modern low emission diesel engines with cooled exhaust gas recirculation and exhaust after treatment technology. It is also suitable for passenger car and light truck diesel engines, and spark ignition engines.

Prepared by : Product Safety: +1 905-804-4752

## SECTION 2. HAZARDS IDENTIFICATION

**Emergency Overview**

| | |
|---|---|
| Appearance | viscous liquid |
| Colour | amber |
| Odour | mild |

**Potential Health Effects**

Primary Routes of Entry : Eye contact
Ingestion
Inhalation
Skin contact

Aggravated Medical Condition : None known.

**Carcinogenicity:**

**IARC** No component of this product present at levels greater than or

equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**ACGIH** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

**Hazardous components**

No hazardous ingredients

## SECTION 4. FIRST AID MEASURES

If inhaled : Move to fresh air.
Artificial respiration and/or oxygen may be necessary.
Seek medical advice.

In case of skin contact : In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Wash skin thoroughly with soap and water or use recognized skin cleanser.
Wash clothing before reuse.
Seek medical advice.

In case of eye contact : Remove contact lenses.
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Obtain medical attention.

If swallowed : Rinse mouth with water.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.
Never give anything by mouth to an unconscious person.
Seek medical advice.

Most important symptoms and effects, both acute and delayed : First aider needs to protect himself.

## SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

| | | |
|---|---|---|
| Unsuitable extinguishing media | : | No information available. |
| Specific hazards during firefighting | : | Cool closed containers exposed to fire with water spray. |
| Hazardous combustion products | : | Carbon oxides (CO, CO2), calcium oxides (CaOx), sulphur oxides (SOx), aldehydes, smoke and irritating vapours as products of incomplete combustion. |
| Further information | : | Prevent fire extinguishing water from contaminating surface water or the ground water system. |

## SECTION 6. ACCIDENTAL RELEASE MEASURES

| | | |
|---|---|---|
| Personal precautions, protective equipment and emergency procedures | : | Use personal protective equipment.<br>Ensure adequate ventilation.<br>Evacuate personnel to safe areas.<br>Material can create slippery conditions. |
| Environmental precautions | : | If the product contaminates rivers and lakes or drains inform respective authorities. |
| Methods and materials for containment and cleaning up | : | Prevent further leakage or spillage if safe to do so.<br>Remove all sources of ignition.<br>Soak up with inert absorbent material.<br>Non-sparking tools should be used.<br>Ensure adequate ventilation.<br>Contact the proper local authorities. |

## SECTION 7. HANDLING AND STORAGE

| | | |
|---|---|---|
| Advice on safe handling | : | For personal protection see section 8.<br>Smoking, eating and drinking should be prohibited in the application area.<br>In case of insufficient ventilation, wear suitable respiratory equipment.<br>Avoid contact with skin, eyes and clothing.<br>Do not ingest.<br>Keep away from heat and sources of ignition.<br>Keep container closed when not in use. |
| Conditions for safe storage | : | Store in original container.<br>Containers which are opened must be carefully resealed and kept upright to prevent leakage.<br>Keep in a dry, cool and well-ventilated place.<br>Keep in properly labelled containers.<br>To maintain product quality, do not store in heat or direct sunlight. |

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

**Engineering measures** : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Personal protective equipment**

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Filter type : organic vapour filter

Hand protection

Material : neoprene, nitrile, polyvinyl alcohol (PVA), Viton(R).

Remarks : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eye protection : Wear face-shield if splashing hazard is likely.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Protective measures : Wash hands and face before breaks and immediately after handling the product.
Wash contaminated clothing before re-use.
Ensure that eyewash station and safety shower are proximal to the work-station location.

Hygiene measures : Wash face, hands and any exposed skin thoroughly after handling.
Remove and wash contaminated clothing and gloves, including the inside, before re-use.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|---|---|---|
| Appearance | : | viscous liquid |
| Colour | : | amber |
| Odour | : | mild |
| Odour Threshold | : | No data available |
| pH | : | No data available |
| Pour point | : | -45 °C (-49 °F) |
| Boiling point/boiling range | : | No data available |

| | | |
|---|---|---|
| Flash point | : | 227 °C (441 °F)<br>Method: Cleveland open cup |
| Fire Point | : | 247 °C (477 °F) |
| Auto-Ignition Temperature | : | No data available |
| Evaporation rate | : | No data available |
| Flammability | : | Low fire hazard. This material must be heated before ignition will occur. |
| Upper explosion limit | : | No data available |
| Lower explosion limit | : | No data available |
| Vapour pressure | : | No data available |
| Density | : | 0.8412 kg/l (15 °C / 59 °F) |
| Solubility(ies) | | |
| Water solubility | : | insoluble |
| Partition coefficient: n-octanol/water | : | No data available |
| Viscosity | | |
| Viscosity, kinematic | : | 82.0 cSt (40 °C / 104 °F) |
| | | 14.10 cSt (100 °C / 212 °F) |
| Explosive properties | : | Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. |

## SECTION 10. STABILITY AND REACTIVITY

| | | |
|---|---|---|
| Possibility of hazardous reactions | : | Hazardous polymerisation does not occur.<br>Stable under normal conditions. |
| Conditions to avoid | : | No data available |
| Incompatible materials | : | Reactive with oxidising agents, acids, halogens and halogen compounds. |
| Hazardous decomposition products | : | May release COx, H2S, aldehydes, alkyl mercaptans, sulfides, methacrylate monomers, smoke and irritating vapours when heated to decomposition. |

## SECTION 11. TOXICOLOGICAL INFORMATION

| | | |
|---|---|---|
| Information on likely routes of exposure | : | Eye contact<br>Ingestion |

Inhalation
Skin contact

**Acute toxicity**

**Product:**

| | | |
|---|---|---|
| Acute oral toxicity | : | Remarks: No data available |
| Acute inhalation toxicity | : | Remarks: No data available |
| Acute dermal toxicity | : | Remarks: No data available |

**Skin corrosion/irritation**

**Product:**

Remarks: No data available

**Serious eye damage/eye irritation**

**Product:**

Remarks: No data available

**Respiratory or skin sensitisation**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**STOT - single exposure**

No data available

**STOT - repeated exposure**

No data available

**Aspiration toxicity**

No data available

## SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Product:**

| | | |
|---|---|---|
| Toxicity to fish | : | Remarks: No data available |
| Toxicity to daphnia and other | : | Remarks: No data available |

aquatic invertebrates

Toxicity to algae : Remarks: No data available

Toxicity to bacteria : Remarks: No data available

**Persistence and degradability**

**Product:**

Biodegradability : Remarks: No data available

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Other adverse effects**

No data available

## SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal methods**

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Offer surplus and non-recyclable solutions to a licensed disposal company.
Waste must be classified and labelled prior to recycling or disposal.
Send to a licensed waste management company.
Dispose of as hazardous waste in compliance with local and national regulations.
Dispose of product residue in accordance with the instructions of the person responsible for waste disposal.

## SECTION 14. TRANSPORT INFORMATION

**International Regulation**

**IATA-DGR**
Not regulated as a dangerous good

**IMDG-Code**
Not regulated as a dangerous good

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**49 CFR**
Not regulated as a dangerous good

**TDG**
Not regulated as a dangerous good

**Special precautions for user**

Not applicable

## SECTION 15. REGULATORY INFORMATION

**WHMIS Classification** : Not Rated

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

**The components of this product are reported in the following inventories:**

| | |
|---|---|
| **DSL** | On the inventory, or in compliance with the inventory |
| **TSCA** | All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption. |
| **IECSC** | On the inventory, or in compliance with the inventory |
| **ELINCS** | At least one component is not listed in EINECS but all such components are listed in ELINCS. |

## SECTION 16. OTHER INFORMATION

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

# Material Safety Data Sheet

COMPRO$_{TM}$ XL-S COMPRESSOR FLUID 32, 46, 68, 100, 150

## 1 . Product and company identification

**Product name** : COMPRO$_{TM}$ XL-S COMPRESSOR FLUID 32, 46, 68, 100, 150

**Code** : CPXS32, 490-225; CPXS46, 490-226; CPXS68, 490-227; CPXS100, 490-228; CPXS150, 490-229

**Material uses** : COMPRO XL-S Compressor Fluids are used for the lubrication of air and inert gas compressors of the reciprocating, rotary screw, and rotary vane types.

These compressor oils should NEVER be used in equipment compressing pure oxygen or other chemically active gases such as chlorine or hydrogen chloride.

DO NOT USE in breathing air apparatus or medical equipment.

**Manufacturer** : PETRO-CANADA
P.O. Box 2844
150 – 6th Avenue South-West
Calgary, Alberta
T2P 3E3

**In case of emergency** : Petro-Canada: 403-296-3000
Canutec Transportation:
613-996-6666
Poison Control Centre: Consult local telephone directory for emergency number(s).

## 2 . Hazards identification

**Physical state** : Viscous liquid.

**Odour** : Hydrocarbon.

**WHMIS (Canada)** : Not controlled under WHMIS (Canada).

**OSHA/HCS status** : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

**Emergency overview** : No specific hazard.

**Routes of entry** : Dermal contact. Eye contact. Inhalation. Ingestion.

**Potential acute health effects**

**Inhalation** : No known significant effects or critical hazards.

**Ingestion** : No known significant effects or critical hazards.

**Skin** : Slightly irritating to the skin.

**Eyes** : Slightly irritating to the eyes.

**Potential chronic health effects**

**Chronic effects** : No known significant effects or critical hazards.

**Carcinogenicity** : Not listed as carcinogenic by OSHA, NTP or IARC.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : No known significant effects or critical hazards.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

**Medical conditions aggravated by over-exposure** : Repeated or prolonged contact with spray or mist may produce chronic eye irritation and severe skin irritation. Repeated skin exposure can produce local skin destruction or dermatitis.

**See toxicological information (section 11)**

# 3 . Composition/information on ingredients

| Name | CAS number | % |
|---|---|---|
| Mixture of severely hydrotreated and hydrocracked base oil (petroleum). | Mixture | - |

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

The base oil may be a mixture of the following CAS#s: 8042-47-5, 64742-46-7, 64742-47-8, 64742-54-7, 64742-55-8, 72623-84-8, 72623-85-9, 72623-86-0, 72623-87-1, 178603-64-0, 178603-65-1, 178603-66-2, 445411-73-4

# 4 . First-aid measures

**Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

**Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

**Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

**Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

**Notes to physician** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

# 5 . Fire-fighting measures

**Flammability of the product** : May be combustible at high temperature.

**Extinguishing media**

**Suitable** : Use an extinguishing agent suitable for the surrounding fire.

**Not suitable** : None known.

**Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

**Products of combustion** : Carbon oxides (CO, CO2), nitrogen oxides (NOx), sulphur oxides (SOx), hydrocarbons, smoke and irritating vapours as products of incomplete combustion.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

**Special remarks on fire hazards** : Low fire hazard. This material must be heated before ignition will occur.

**Special remarks on explosion hazards** : Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

# 6 . Accidental release measures

**Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

**Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

# 6 . Accidental release measures

**Methods for cleaning up**

**Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

# 7 . Handling and storage

**Handling** : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

# 8 . Exposure controls/personal protection

| Ingredient | Exposure limits |
|---|---|
| Mixture of severely hydrotreated and hydrocracked base oil (petroleum). | **ACGIH TLV (United States). Notes: (oil mist)**<br>TWA: 5 mg/m³ 8 hour(s).<br>STEL: 10 mg/m³ 15 minute(s). |

**Consult local authorities for acceptable exposure limits.**

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

**Engineering measures** : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal protection**

**Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: organic vapour filter

**Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Recommended: neoprene, nitrile, polyvinyl alcohol (PVA), Viton.

## 8 . Exposure controls/personal protection

**Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

**Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## 9 . Physical and chemical properties

**Physical state** : Viscous liquid.

**Flash point** : Open cup: ≥200°C (392°F) [Cleveland.]

**Auto-ignition temperature** : **32:** Fire Point: 246°C (475°F)
**46:** Fire Point: 258°C (296°F)
**68:** Fire Point: 270°C (518°F)
**100:** Fire Point: 292°C (578°F)
**150:** Fire Point: 300°C (572°F)

**Flammable limits** : Not available.

**Colour** : Pale yellow.

**Odour** : Hydrocarbon.

**Odour threshold** : Not available.

**pH** : Not available.

**Boiling/condensation point** : Not available.

**Melting/freezing point** : Not available.

**Relative density** : 0.861 to 0.878 kg/L @ 15°C (59°F)

**Vapour pressure** : Not available.

**Vapour density** : Not available.

**Volatility** : Not available.

**Evaporation rate** : Not available.

**Viscosity** : **32:** 36 cSt @ 40°C (104°F), 6.2 cSt @ 100°C (212°F), VI=108; **46:** 46.6 cSt @ 40°C (104°F), 7.0 cSt @ 100°C (212°F), VI=107; **68:** 68.4 cSt @ 40°C (104°F), 8.9 cSt @ 100°C (212°F), VI=101; **100:** 101.7 cSt @ 40°C (104°F), 11.43 cSt @ 100°C (212°F), VI=97; **150:** 143.0 cSt @ 40°C (104°F), 14.9 cSt @ 100°C (212°F), VI=104

**Pour Point** : **32:** -36°C (-33°F); **46:** -33°C (-27°F); **68:** -30°C (-22°F); **100:** -27°C (-17°F); **150:** -24°C (-11°F)

**Solubility** : Insoluble in water.

## 10 . Stability and reactivity

**Chemical stability** : The product is stable.

**Hazardous polymerisation** : Under normal conditions of storage and use, hazardous polymerisation will not occur.

**Materials to avoid** : Reactive with oxidising agents, acids, alkalis and reducing agents.

**Hazardous decomposition products** : May release COx, NOx, hydrocarbons, methacrylate monomers, diphenylamine, smoke and irritating vapours when heated to decomposition.

# 11 . Toxicological information

**Acute toxicity**

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---|---|---|---|
| Mixture of severely hydrotreated and hydrocracked base oil (petroleum). | LD50 Dermal | Rabbit | >2000 mg/kg | - |
| | LD50 Oral | Rat | >5000 mg/kg | - |
| | LC50 Inhalation Dusts and mists | Rat | >2500 mg/m³ | 4 hours |

**Conclusion/Summary** : Not available.

**Chronic toxicity**

**Conclusion/Summary** : Not available.

**Irritation/Corrosion**

**Conclusion/Summary** : Not available.

**Sensitiser**

**Conclusion/Summary** : Not available.

**Carcinogenicity**

**Conclusion/Summary** : Not available.

**Mutagenicity**

**Conclusion/Summary** : Not available.

**Teratogenicity**

**Conclusion/Summary** : Not available.

**Reproductive toxicity**

**Conclusion/Summary** : Not available.

# 12 . Ecological information

**Environmental effects** : No known significant effects or critical hazards.

**Aquatic ecotoxicity**

**Conclusion/Summary** : Not available.

**Biodegradability**

**Conclusion/Summary** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

# 13 . Disposal considerations

**Waste disposal** : The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**Disposal should be in accordance with applicable regional, national and local laws and regulations.**

**Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.**

# 14 . Transport information

| Regulatory information | UN number | Proper shipping name | Classes | PG* | Label | Additional information |
|---|---|---|---|---|---|---|
| TDG Classification | Not regulated. | - | - | - | | - |
| DOT Classification | Not available. | Not available. | Not available. | - | | - |

## 14 . Transport information

PG* : Packing group

## 15 . Regulatory information

**United States**

**HCS Classification** : Not regulated.

**U.S. Federal regulations / State regulations** : All components of this product are listed on TSCA or are exempt. A component of this product is subject to a TSCA Polymer Exemption - if you intend to import this product into the U.S. please contact Product Safety for more information.

**Canada**

**WHMIS (Canada)** : Not controlled under WHMIS (Canada).

**This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.**

**EU regulations**

**Risk phrases** : This product is not classified according to EU legislation.

**International regulations**

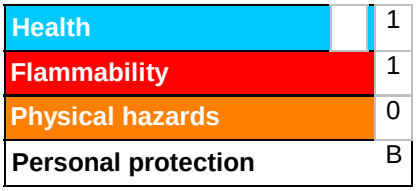
**Canada inventory** : All components are listed or exempted.

**United States inventory (TSCA 8b)** : All components are listed or exempted.

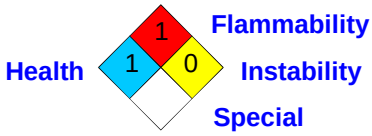
**Europe inventory** : All components are listed or exempted.

## 16 . Other information

**Hazardous Material Information System (U.S.A.)** :




**National Fire Protection Association (U.S.A.)** :




**References** : Available upon request.
TM/MC Marque de commerce de Petro-Canada - Trademark

**Date of printing** : **3/5/2009.**

**Date of issue** : 5 March 2009

**Date of previous issue** : No previous validation.

**Responsible name** : **Product Safety - JDW**

**Indicates information that has changed from previously issued version.**

**For Copy of (M)SDS** : The Canadian Controlled Products Regulations (CPR) (Under the Hazardous Products Act, part of the WHMIS legislation) only apply to WHMIS Controlled (i.e., hazardous) products. Therefore, the CPR and the 3-year update rule specified therein do not apply to WHMIS Non-Controlled products. Although this is true, customarily Petro-Canada reviews and updates Non-Controlled product MSDS if a customer requests such an update. These Non-Controlled product updates are given a lower priority than Controlled products but are handled as soon as practicable. If you would like to verify if the MSDS you have is the most current, or you require any further information, please contact:

Internet: lubricants.petro-canada.com/msds

Lubricants:

# 16 . Other information

Western Canada, telephone: 1-800-661-1199; fax: (780) 464-9564
Ontario & Central Canada, telephone: 1-800-268-5850; fax: 1-800-201-6285
Quebec & Eastern Canada, telephone: 1-800-576-1686; fax: 1-800-201-6285

For Product Safety Information: (905) 804-4752

**Notice to reader**

**To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.**
**Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.**

## MATERIAL SAFETY DATA SHEET

## SECTION I – PRODUCT INFORMATION

**Product Name**: Propane
**Trade Name**: LPG (Liquefied Petroleum Gas)
**Chemical Formula**: C3H8
**WHMIS Classification**: Class A – Compressed Gas
Class B, Division I – Flammable Gas

**Supplier**: <Product Supplier Contact Information>
**Manufacturer:** <Product Manufacturer Contact Information>
**Non-Medical Emergency**: <Phone number>

**Uses and Occurrence**: Propane is commonly used as fuel for heating, cooking, automobiles, forklift trucks, crop drying and welding and cutting operations. Propane is used in industry as a refrigerant, solvent and as a chemical feedstock.

CEPA: CANADIAN ENVIRONMENTAL PROTECTION ACT

All components of this product are either on the Domestic Substances List (DSL) or are exempt.

## SECTION II – HAZARDOUS INGREDIENTS

| Components | CAS Registry No. | Proportion of Product | LC50 | LD50 |
|---|---|---|---|---|
| Propane | 74-98-6 | 95% - 98% | N/A | N/A |
| Ethane | 74-84-0 | 3% - 5% | N/A | N/A |
| Butane | 106-97-8 | 1% - 3% | N/A | N/A |
| Iso-Butane | 75-28-5 | 0.1% - 0.3% | N/A | N/A |
| Methane | 74-82-8 | 0.1% - 0.2% | N/A | N/A |

**Note**: Composition given is typical for Grade 1 (GPA2140 HD-5 Specification) Propane; exact composition will vary from shipment to shipment.

## SECTION III – CHEMICAL AND PHYSICAL DATA

**Form**: While stored under pressure – liquid and/or vapour
**Boiling Point**: -42 $^{o}$C atm
**Freezing Point**: -188 $^{o}$C
**Evapouration Rate**: Rapid (Gas at Normal Ambient Conditions)
**Vapour Pressure**: 1,013 (kPa) @ 26.0 $^{o}$C
**Vapour Density**: 1.52 (Air = 1)
**Coefficient of Water/Oil Distribution**: Not available
**PH**: Not available
**Soluble in Water**: 6.1% by Volume @ 17.8 $^{o}$C and 753 mmHg

**Specific Gravity**: 0.51 (Water = 1)
**Appearance**: Colourless liquid and vapour while stored under pressure.

Colourless and odourless gas in natural state at any concentration.

Commercial propane has an odourant added which is commonly ethyl mercaptan which has an odour similar to boiling cabbage or rotten eggs.
**Odour Threshold**: 4800 PPM

***See Note 1 - Odourants***

## SECTION IV – FIRE OR EXPLOSION HAZARD DATA

**Flash Point**: -103.4 °C **Method**: Closed Cup

**Flammable Limits**: Lower 2.4%, Upper 9.5%

**Auto Ignition Temperature**: 432 °C

**Products Evolved Due to Heat or Combustion**: Carbon monoxide can be produced when primary and secondary airs are deficient while combustion is taking place.

**Fire and Explosive Hazards**: Explosive air-vapour mixtures may form if allowed to leak to atmosphere.

**Sensitivity to Impact**: No

**Sensitivity to Static Discharge**: Yes

**Fire Extinguishing Precautions**: Use water spray to cool exposed cylinders or tanks. Do not extinguish fire unless the source of the escaping gas that is fuelling the fire can be turned off. Fire can be extinguished with carbon dioxide and/or dry chemical (BC). Container metal shells require cooling with water to prevent flame impingement and the weakening of metal. If weakening occurs, the area must be evacuated. If gas has not ignited, liquid and vapour may be dispersed by water spray or flooding.

**Special Fire Fighting Equipment**: Protective clothing, hose monitors, fog nozzles, self contained breathing apparatus.

## SECTION V – REACTIVITY DATA

**Stability**: Stable

**Conditions to Avoid**: Keep separate from oxidizing agents. Gas explodes spontaneously when mixed with chlorine dioxide.

**Incompatibility**: Remove sources of ignition and observe distance requirements for storage tanks from combustible material, drains, and openings to buildings.

**Hazardous Decomposition Products**: Deficient primary and secondary air can produce carbon monoxide.

**Hazardous Polymerization**: Will not occur.

## SECTION VI – TOXICOLOGICAL PROPERTIES OF MATERIAL

**ACUTE EXPOSURE**:

**Eyes**: As a gas, none, Liquid causes “cold burns’.

**Respiratory System**: Little physiological effect at concentrations below 10,000 PPM. Higher concentrations may cause dizziness and unconsciousness due to asphyxiation.
***SEE NOTE 2 – ASPHYXIANT.***

**Chronic Exposure**: There are no reported effects from long-term low-level exposure.

**Other**: Liquid can cause burns and frostbite if in direct contact with skin.

**Sensitization Properties**: Skin – unknown, **Respiratory** – unknown.

**Carcinogenicity**: Not determined.
***SEE NOTE 3 (NORM).***

**MEDIAN LETHAL DOSE**:

**Oral**: Not applicable for gas.

**Inhalation**: Not determined.

**Dermal**: Not applicable for gas.

**Other**: Not determined.

**IRRITATION INDEX**:

**Skin**: No appreciable effect (gas).

**Eyes**: No appreciable effect (gas).

**Symptoms of Exposure**: Above 10,000 PPM – dizziness, stupor, unconsciousness. ***SEE NOTE 2 attached.*** American Conference of Governmental Industrial Hygienists (ACGIH) classifies propane as an asphyxiate; there is no recommended “Threshold Limit Value” (TLV).

**Teratogenicity**: Not determined.

**Mutagenicity**: Not determined.

## SECTION VII – OCCUPATION CONTROL PROCEDURES

**Eyes**: Safety glasses, goggles, or face shield required when transferring product.

**Skin**: Insulated gloves if contact with liquid or liquid cooled equipment is expected. Wear gloves and long sleeves when transferring product.

**Inhalation**: In atmosphere, where the concentration of propane would reduce oxygen level below 18% in inhaled air, self contained breathing apparatus required.

***SEE NOTE 3 – (NORM).***

**Ventilation**: Explosion proof ventilation equipment required in confined spaces.

## SECTION VIII – EMERGENCY AND FIRST AID PROCEDURES

**FIRST AID:**

**Eyes**: Should eye contact with liquid occur, flush eyes with lukewarm water for 15 minutes. Obtain immediate medical care.

**Skin**: In case of "Cold Burn" from contact with liquid, immediately place affected area in lukewarm water and keep at this temperature until circulation returns. If fingers or hands are frostbitten, have the victim hold his hand next to his body such as under the armpit. Obtain immediate medical care.

**SPILL OR LEAK**:

Eliminate leak if possible.

Eliminate source of ignition.

Ensure cylinder is upright.

Disperse vapours with hose streams using fog nozzles, watch for low area, as propane is heavier than air and can settle in low areas. Remain upwind of leak, keep people away.

Prevent vapour and/or liquid from entering into sewers, basements or confined areas.

## SECTION 1X – TRANSPORTATION, HANDLING AND STORAGE

- Transport and store cylinders and tanks secured in an upright position in a ventilated space, away from ignition sources (so relief valve is in contact with vapour space of cylinder or tank).
- Cylinders that are not in use must have the valves in the closed position and be equipped with a protective cap or guard.
- Do not store with oxidizing agents, oxygen or chlorine cylinders.
- Transport, handle and store according to applicable federal and provincial regulations (CGA B149.2).
- ***SEE NOTE 4 – MAGNETIC RESIDUES.***

**TDG Classification**: 2.1 (gas)

**TDG Shipping Name**: Liquid Petroleum Gas (Propane)

**TDG Special Provisions**: 56, 90, and 102

**PIN UN**: 1075

## SECTION X – PREPARATION INFORMATION

**Prepared by**: Canadian Propane Association
(613) 683-2270

**Date prepared**: July 2012
Last updated: May 2014

The information contained herein is believed to be accurate. It is provided independently of any sale of the product. It is not intended to constitute performance information concerning the product. No express warranty or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product information contained herein.

This information is in addition to the information supplied on the MSDS and forms a part of the MSDS by reference to note numbers indicated:

**NOTE 1 - ODOURANTS:**

Odourants are not completely effective warning agents in all cases.

Certain odourants are polar and/or chemically reactive and may be depleted by reaction or absorption.

Sensitivity to odourants differs from person to person and may decrease with age or impaired physical conditions such as colds or respiratory allergies.

Prolonged exposure to odourants can create desensitization to the odour.

**NOTE 2 - ASPHYXIANT AND NARCOTIC EFFECTS OF PROPANE:**

LPG's can displace air and can act as an asphyxiant. Lack of oxygen may cause dizziness, headaches, diminished awareness, faulty judgment, increase in fatigue and impaired muscular co-ordination. If these symptoms are identified while working in close proximity to propane that is released, go immediately into a fresh air environment.

LPG's are anaesthetic gases within the upper explosive limits and higher concentrations. A person working around propane in an enclosed space or in close proximity to a propane source such as filling cylinders, purging lines, investigating leaks, etc. who feels light-headed, dizzy, drunken, sleepy, or intoxicated should go immediately into fresh air. This narcotic effect may impair a person's judgment temporarily but will rapidly disappear in fresh air.

**NOTE 3 - NATURALLY OCCURRING RADIOACTIVE MATERIAL (NORM):**

Sludges and tank scale from propane storage tanks, bulk delivery truck tanks, railway tank cars, and fuel filters and strainers screens may contain Naturally Occurring Radioactive Material (NORM) in the form of lead 210.

Equipment used for the transfer of propane such as propane piping and hoses, pumps and compressors may have detectable levels of radioactive lead 210 on inner surfaces.

Workers involved in cleaning, repair or maintenance on inner surfaces of such equipment should avoid breathing dust generated from such activities. Suitable codes of practice should be developed for the activities, detailing appropriate occupational hygiene and disposal practices.

**NOTE 4 - MAGNETIC RESIDUES IN PROPANE:**

Magnetic residues present in automotive fuel tanks from "mill scale" or corrosion processes may impair the operation of magnetic gauges and electronic solenoid valves.

Collection of gross amounts of solid residues can affect the proper operation of lock offs, mixers, pressure release valves, etc.

Solid residues could contain NORM (see note 3).

# John Deere Cool-Gard™ II Premix

Safety Data Sheet

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products

Date of issue: 07/30/2014 Version: 1.0

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Product Form : Mixture

Trade name : John Deere Cool-Gard™ II Premix

Product code : TY26575, TY26576, TY26577, TY26578

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Engine Coolant and Anti-freeze

### 1.3. Details of the supplier of the safety data sheet

**MANUFACTURER:**
Northland Products
1000 Rainbow Drive
Waterloo, IA 50704

Tel: +1-319-234-5585
+1-800-772-1724

**SUPPLIER:**
Deere & Company
One John Deere Place
Moline, IL 61265

### 1.4. Emergency telephone number

Emergency number : Chemtrec 1-800-424-9300
Chemtrec (Outside USA) +1 703-527-3887 (24 hours)
Supplier: +1-309-748-5636 (24 hours)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**GHS-US classification**

| | |
|---|---|
| Acute Tox. 4 (Oral) | H302 |
| Skin Irrit. 2 | H315 |
| Eye Irrit. 2A | H319 |
| STOT RE 2 | H373 |

**WHMIS Classification**

Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects
Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
Class D Division 2 Subdivision B - Toxic material causing other toxic effects

### 2.2. Label elements

**GHS-US labelling**

Hazard pictograms (GHS-US) :

GHS07 GHS08

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) : H302 - Harmful if swallowed
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H373 - May cause damage to organs (kidneys) through prolonged or repeated exposure (oral)

Precautionary statements (GHS-US) : P260 - Do not breathe dust, fume, mist, spray, vapours
P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P280 - Wear protective gloves, eye protection, protective clothing
P301+P312 - If swallowed: Call a a doctor, a POISON CENTER if you feel unwell
P302+P352 - If on skin: Wash with plenty of water
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P314 - Get medical advice/attention if you feel unwell

P321 - Specific treatment (see on this label)
P330 - Rinse mouth
P332+P313 - If skin irritation occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse
P501 - Dispose of contents/container to comply with applicable local, national and international regulation.

### 2.3. Other hazards

other hazards which do not result in classification : Spills of this product present a serious slipping hazard.

### 2.4. Unknown acute toxicity (GHS-US)

No data available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

### 3.2. Mixture

| Name | Product identifier | % | GHS-US classification |
|---|---|---|---|
| Ethylene glycol | (CAS No) 107-21-1 | 45 - 50 | Acute Tox. 4 (Oral), H302<br>STOT RE 2, H373 |
| Sodium tetraborate decahydrate | (CAS No) 1303-96-4 | 0.5 – 1.5 | Repr. 1B, H360 |
| Sodium hydroxide | (CAS No) 1310-73-2 | 0.5 – 1.5 | Acute Tox. 4 (Dermal), H312<br>Skin Corr. 1A, H314<br>Eye Dam. 1, H318 |

| Ethylene glycol (107-21-1) | |
|---|---|
| WHMIS Classification | Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects<br>Class D Division 2 Subdivision A - Very toxic material causing other toxic effects |

| Sodium tetraborate decahydrate (1303-96-4) | |
|---|---|
| WHMIS Classification | Class D Division 2 Subdivision B - Toxic material causing other toxic effects |

| Sodium hydroxide (1310-73-2) | |
|---|---|
| WHMIS Classification | Class E - Corrosive Material |

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Assure fresh air breathing. If breathing is difficult, give oxygen. In all cases of doubt, or when symptoms persist, seek medical advice.

First-aid measures after skin contact : Rinse and then wash skin thoroughly with water and soap. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

First-aid measures after eye contact : In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing. If redness, burning, blurred vision or swelling occur, transport to nearest medical facility for additional treatment. Get medical advice/attention.

First-aid measures after ingestion : If swallowed, rinse mouth with water (only if the person is conscious). Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Obtain emergency medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Causes damage to organs (kidneys) (Oral).

Symptoms/injuries after inhalation : Long-term (repeated). Inhalation of mist or aerosol may cause irritation to nose and throat.

Symptoms/injuries after skin contact : Causes skin irritation.

Symptoms/injuries after eye contact : Causes serious eye irritation. Swelling and inflammation.

Symptoms/injuries after ingestion : Harmful if swallowed. Ingestion may cause nausea and vomiting. Depression of the central nervous system, headaches, dizziness, drowsiness, loss of coordination. In the case of extreme exposure there is a risk of severe metabolic acidosis and haemorrhagy. Death in extreme cases. Symptoms may be delayed.

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Symptoms may be delayed.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water fog. Water spray. Sand.

Unsuitable extinguishing media : Do not use a water jet since it may cause the fire to spread.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : When heated above the flash point, releases vapours. Gas/vapours, flammable.

Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

### 5.3. Advice for firefighters

Precautionary measures fire : Stop and contain spill/release if it can be done safely. If this cannot be done, allow fire to burn under control. Gases/vapours, toxic.

Firefighting instructions : Exercise caution when fighting any chemical fire. Do not use direct water stream; may spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries. Cool closed containers exposed to fire with water spray. Prevent fire-fighting water from entering environment.

Protective equipment for firefighters : Wear approved self-contained breathing apparatus (set on positive pressure mode). Do not enter fire area without proper protective equipment, including respiratory protection.

Other information : Special danger of slipping by leaking/spilling product. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Spilled material may present a slipping hazard. Stop leak if safe to do so. Eliminate all ignition sources if safe to do so.

#### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ensure adequate ventilation, especially in confined areas.

### 6.2. Environmental precautions

Prevent contamination of soil, drains and surface waters. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Approach from upwind. For small spills, absorb or cover with dry earth, sand, or other inert non-combustible absorbent material and place into waste containers for later disposal. Gather the product and place it in a spare container that has been suitably labelled. Consult the appropriate authorities about waste disposal. Large spills: Contain large spills to maximize product recovery or disposal. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Shovel into suitable and closed container for disposal. Minimize generation of dust. Store away from other materials. Ensure all national/local regulations are observed.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed : Special danger of slipping by leaking/spilling product.

Precautions for safe handling : Avoid contact with skin, eyes and clothes. Avoid breathing dust/fume/gas/mist/vapours/spray. Provide good ventilation in process area to prevent formation of vapour. Personal protective equipment should be selected based upon the conditions under which this product is handled or used. Empty container retains product residue. Use and store away from all naked flames, heat sources or working electrical appliances. Do not smoke.

Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Separate working clothes from town clothes. Launder separately. Do not eat, drink or smoke when using this product. Discard contaminated leather articles. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Provide adequate ventilation. A washing facility/water for eye and skin cleaning purposes should be present.

| | | |
|---|---|---|
| Storage conditions | : | Keep out of reach of children. Keep container tightly closed. Keep only in the original container in a cool, well-ventilated place away from highly flammable substances. Keep away from open flames, hot surfaces and sources of ignition. Keep out of direct sunlight. Protect from moisture. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. |
| Incompatible materials | : | Refer to Section 10 on Incompatible Materials. |
| Heat and ignition sources | : | Remove all sources of ignition. |
| Storage area | : | Store in dry, cool, well-ventilated area. Keep away from heat and direct sunlight. |

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

| Ethylene glycol (107-21-1) | | |
|---|---|---|
| ACGIH | ACGIH Ceiling (mg/m³) | 100 mg/m³ |
| Alberta | OEL Ceiling (mg/m³) | 100 mg/m³ |
| British Columbia | OEL Ceiling (mg/m³) | 100 mg/m³ |
| British Columbia | OEL Ceiling (ppm) | 50 ppm |
| British Columbia | OEL STEL (mg/m³) | 20 mg/m³ |
| British Columbia | OEL TWA (mg/m³) | 10 mg/m³ |
| Manitoba | OEL Ceiling (mg/m³) | 100 mg/m³ |
| New Brunswick | OEL Ceiling (mg/m³) | 100 mg/m³ |
| New Foundland & Labrador | OEL Ceiling (mg/m³) | 100 mg/m³ |
| Nova Scotia | OEL Ceiling (mg/m³) | 100 mg/m³ |
| Nunavut | OEL Ceiling (mg/m³) | 127 mg/m³ |
| Nunavut | OEL Ceiling (ppm) | 50 ppm |
| Nunavut | OEL STEL (mg/m³) | 20 mg/m³ |
| Nunavut | OEL TWA (mg/m³) | 10 mg/m³ |
| Northwest Territories | OEL Ceiling (mg/m³) | 127 mg/m³ |
| Northwest Territories | OEL Ceiling (ppm) | 50 ppm |
| Northwest Territories | OEL STEL (mg/m³) | 20 mg/m³ |
| Northwest Territories | OEL TWA (ppm) | 10 ppm |
| Ontario | OEL Ceiling (mg/m³) | 100 mg/m³ |
| Prince Edward Island | OEL Ceiling (mg/m³) | 100 mg/m³ |
| Québec | PLAFOND (mg/m³) | 127 mg/m³ |
| Québec | PLAFOND (ppm) | 50 ppm |
| Saskatchewan | OEL Ceiling (mg/m³) | 100 mg/m³ |
| Yukon | OEL STEL (mg/m³) | 325 mg/m³ |
| Yukon | OEL STEL (ppm) | 125 ppm |
| Yukon | OEL TWA (mg/m³) | 250 mg/m³ |
| Yukon | OEL TWA (ppm) | 100 ppm |

| Sodium tetraborate decahydrate (1303-96-4) | | |
|---|---|---|
| ACGIH | ACGIH TWA (mg/m³) | 2 mg/m³ |
| ACGIH | ACGIH STEL (mg/m³) | 6 mg/m³ |
| NIOSH | NIOSH REL (TWA) (mg/m³) | 5 mg/m³ |
| Alberta | OEL STEL (ppm) | 3 ppm |
| Alberta | OEL TWA (mg/m³) | 1 mg/m³ |
| British Columbia | OEL STEL (mg/m³) | 6 mg/m³ |
| British Columbia | OEL TWA (mg/m³) | 2 mg/m³ |
| Manitoba | OEL STEL (mg/m³) | 6 mg/m³ |
| Manitoba | OEL TWA (mg/m³) | 2 mg/m³ |
| New Brunswick | OEL TWA (mg/m³) | 5 mg/m³ |
| New Foundland & Labrador | OEL STEL (mg/m³) | 6 mg/m³ |
| New Foundland & Labrador | OEL TWA (mg/m³) | 2 mg/m³ |

| Sodium tetraborate decahydrate (1303-96-4) | | |
|---|---|---|
| Nova Scotia | OEL STEL (mg/m³) | 6 mg/m³ |
| Nova Scotia | OEL TWA (mg/m³) | 2 mg/m³ |
| Nunavut | OEL STEL (mg/m³) | 10 mg/m³ |
| Nunavut | OEL TWA (mg/m³) | 5 mg/m³ |
| Northwest Territories | OEL STEL (mg/m³) | 10 mg/m³ |
| Northwest Territories | OEL TWA (mg/m³) | 5 mg/m³ |
| Ontario | OEL STEL (mg/m³) | 6 mg/m³ |
| Ontario | OEL TWA (mg/m³) | 2 mg/m³ |
| Prince Edward Island | OEL STEL (mg/m³) | 6 mg/m³ |
| Prince Edward Island | OEL TWA (mg/m³) | 2 mg/m³ |
| Québec | VEMP (mg/m³) | 5 mg/m³ |
| Saskatchewan | OEL STEL (mg/m³) | 6 mg/m³ |
| Saskatchewan | OEL TWA (mg/m³) | 2 mg/m³ |

| Sodium hydroxide (1310-73-2) | | |
|---|---|---|
| ACGIH | ACGIH Ceiling (mg/m³) | 2 mg/m³ |
| OSHA | OSHA PEL (TWA) (mg/m³) | 2 mg/m³ |
| IDLH | US IDLH (mg/m³) | 10 mg/m³ |
| NIOSH | NIOSH REL (ceiling) (mg/m³) | 2 mg/m³ |
| Alberta | OEL Ceiling (mg/m³) | 2 mg/m³ |
| Alberta | Notations and remarks | 3 |
| British Columbia | OEL Ceiling (mg/m³) | 2 mg/m³ |
| Manitoba | OEL Ceiling (mg/m³) | 2 mg/m³ |
| New Brunswick | OEL Ceiling (mg/m³) | 2 mg/m³ |
| New Foundland & Labrador | OEL Ceiling (mg/m³) | 2 mg/m³ |
| Nova Scotia | OEL Ceiling (mg/m³) | 2 mg/m³ |
| Nunavut | OEL Ceiling (mg/m³) | 2 mg/m³ |
| Northwest Territories | OEL Ceiling (mg/m³) | 2 mg/m³ |
| Ontario | OEL Ceiling (mg/m³) | 2 mg/m³ |
| Prince Edward Island | OEL Ceiling (mg/m³) | 2 mg/m³ |
| Québec | PLAFOND (mg/m³) | 2 mg/m³ |
| Saskatchewan | OEL Ceiling (mg/m³) | 2 mg/m³ |
| Yukon | OEL Ceiling (mg/m³) | 2 mg/m³ |

### 8.2. Exposure controls

Appropriate engineering controls : A washing facility/water for eye and skin cleaning purposes should be present. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits. Ensure adequate ventilation.

Personal protective equipment : Avoid all unnecessary exposure. Personal protective equipment should be selected based upon the conditions under which this product is handled or used. For certain operations, additional Personal Protection Equipment (PPE) may be required. Gloves. Protective clothing. Protective goggles.

Hand protection : Wear protective gloves. Nitrile-rubber protective gloves. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Eye protection : Chemical goggles or safety glasses. with side-shields. Eye protection, including both chemical splash goggles and face shield, must be worn when possibility exists for eye contact due to spraying liquid or airborne particles.

Skin and body protection : Chemical resistant suit. Wear rubber boots. Wear suitable protective clothing.

Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Use a properly fitted, air-purifying or air-fed respirator if neceassary.

Other information : Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

| | |
|---|---|
| Physical state | : Liquid |
| Appearance | : Clear. viscous liquid. |
| Colour | : Gold. |
| odour | : Odourless. |
| Odour threshold | : 25 ppm |
| pH | : 7.8 - 8.5 |
| Relative evaporation rate (butyl acetate=1) | : 0.01 |
| Melting point | : -13 °C (9 ºF) |
| Freezing point | : -37 °C (-34 ºF) |
| Boiling point | : 129 °C (264 ºF) |
| Flash point | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : No data available |
| Vapour pressure | : < 0.008 kPa |
| Relative vapour density at 20 °C | : 2.1 |
| Relative density | : 1.07 - 1.08 g/cm³ |
| Solubility | : Water: completely soluble<br>Soluble in: Water. Diethyl ether. Methanol |
| Log Pow | : -1.07 |
| Log Kow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : 21 mPa.s |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : No data available |

### 9.2. Other information

VOC content : 49.5

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable at normal conditions.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

Oxidizing agents. Strong acids. strong bases. Contact with Aluminium, Zinc and Tin can cause formation of hydrogen that together with air can be an combustible mixture.

### 10.6. Hazardous decomposition products

unburned hydrocarbons. Fume. Carbon monoxide. Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed.

| John Deere Cool-Gard™ II Premix | |
|---|---|
| ATE CLP (oral) | 500.000 mg/kg bodyweight |

| Ethylene glycol (107-21-1) | |
|---|---|
| LD50 oral rat | 4000 mg/kg |
| LD50 dermal rabbit | 9530 µl/kg |
| ATE CLP (oral) | 500.000 mg/kg |

| Sodium tetraborate decahydrate (1303-96-4) | |
|---|---|
| LD50 oral rat | 2660 mg/kg |

| Sodium hydroxide (1310-73-2) | |
|---|---|
| LD50 dermal rabbit | 1350 mg/kg |
| ATE CLP (dermal) | 1350.000 mg/kg bodyweight |

Skin corrosion/irritation : Causes skin irritation.
pH: 7.8 - 8.5

Serious eye damage/irritation : Causes serious eye irritation.
pH: 7.8 - 8.5

Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)

Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)

Reproductive toxicity : Not classified (Conclusive but not sufficient for classification)

Specific target organ toxicity (single exposure) : Not classified (Based on available data, the classification criteria are not met)

Specific target organ toxicity (repeated exposure) : May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/injuries after inhalation : Long-term (repeated). Inhalation of mist or aerosol may cause irritation to nose and throat.

Symptoms/injuries after skin contact : Causes skin irritation.

Symptoms/injuries after eye contact : Causes serious eye irritation. Swelling and inflammation.

Symptoms/injuries after ingestion : Harmful if swallowed. Ingestion may cause nausea and vomiting. Depression of the central nervous system, headaches, dizziness, drowsiness, loss of coordination. In the case of extreme exposure there is a risk of severe metabolic acidosis and haemorrhagy. Death in extreme cases. Symptoms may be delayed.

## SECTION 12: Ecological information

### 12.1. Toxicity

| Ethylene glycol (107-21-1) | |
|---|---|
| LC50 fishes 1 | 41000 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss) |
| EC50 Daphnia 1 | 46300 mg/l (Exposure time: 48 h - Species: Daphnia magna) |
| LC50 fish 2 | 14 - 18 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static]) |

| Sodium hydroxide (1310-73-2) | |
|---|---|
| LC50 fishes 1 | 45.4 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static]) |

### 12.2. Persistence and degradability

| John Deere Cool-Gard™ II Premix | |
|---|---|
| Persistence and degradability | Not established. |

### 12.3. Bioaccumulative potential

| John Deere Cool-Gard™ II Premix | |
|---|---|
| Log Pow | -1.07 |
| Bioaccumulative potential | Not established. |

| Ethylene glycol (107-21-1) | |
|---|---|
| Log Pow | -1.93 |

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose of contents/container to comply with applicable local, national and international regulations. Liquid product may not be disposed of with household waste or landfilled. Do not allow to enter into drains/waters or in the soil. Do not re-use empty containers. Since emptied containers retain product residue, follow label warnings even after container is emptied. Dispose in a safe manner in accordance with local/national regulations. Dispose of at an licensed site.

Additional information : Do not pressurize, cut, weld, braze, solder, drill, grind, or expose containers to flames, sparks, heat, or other potential ignition sources. Empty container retains product residue.

Ecology - waste materials : Prevent contamination of soil, drains and surface waters. Avoid release to the environment.

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1. UN number

Not applicable

### 14.2. UN proper shipping name

Not applicable

### 14.2 Additional information

Other information : No supplementary information available.

**Overland transport**

No additional information available

**Transport by sea**

No additional information available

**Air transport**

No additional information available

## SECTION 15: Regulatory information

**CANADA**

| John Deere Cool-Gard™ II Premix | |
|---|---|
| WHMIS Classification | Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects<br>Class D Division 2 Subdivision A - Very toxic material causing other toxic effects<br>Class D Division 2 Subdivision B - Toxic material causing other toxic effects |

| Ethylene glycol (107-21-1) | |
|---|---|
| Listed on the Canadian DSL (Domestic Sustances List) | |
| WHMIS Classification | Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects<br>Class D Division 2 Subdivision A - Very toxic material causing other toxic effects |

| Sodium tetraborate decahydrate (1303-96-4) | |
|---|---|
| Listed on the Canadian DSL (Domestic Sustances List) | |
| WHMIS Classification | Class D Division 2 Subdivision B - Toxic material causing other toxic effects |

| Sodium hydroxide (1310-73-2) | |
|---|---|
| Listed on the Canadian DSL (Domestic Sustances List) | |
| WHMIS Classification | Class E - Corrosive Material |

### 15.2. International regulations

| Ethylene glycol (107-21-1) |
|---|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory<br>Listed on United States SARA Section 313 |

| Sodium tetraborate decahydrate (1303-96-4) |
|---|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory |

| Sodium hydroxide (1310-73-2) |
|---|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory |

**EU-Regulations**

| **Ethylene glycol (107-21-1)** |
|---|
| Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) |

| **Sodium hydroxide (1310-73-2)** |
|---|
| Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) |

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

No additional information avialble

**Classification according to Directive 67/548/EEC or 1999/45/EC**

No additional information avialble

**15.2.2. National regulations**

| **Ethylene glycol (107-21-1)** |
|---|
| Listed on the AICS (Australian Inventory of Chemical Substances)<br>Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)<br>Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory<br>Listed on the Korean ECL (Existing Chemicals List)<br>Listed on NZIoC (New Zealand Inventory of Chemicals)<br>Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)<br>Listed on the Canadian IDL (Ingredient Disclosure List) |

| **Sodium tetraborate decahydrate (1303-96-4)** |
|---|
| Listed on the AICS (Australian Inventory of Chemical Substances)<br>Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)<br>Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory<br>Listed on the Korean ECL (Existing Chemicals List)<br>Listed on NZIoC (New Zealand Inventory of Chemicals)<br>Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)<br>Japanese Pollutant Release and Transfer Register Law (PRTR Law)<br>Listed on the Canadian IDL (Ingredient Disclosure List) |

| **Sodium hydroxide (1310-73-2)** |
|---|
| Listed on the AICS (Australian Inventory of Chemical Substances)<br>Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)<br>Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory<br>Listed on the Korean ECL (Existing Chemicals List)<br>Listed on NZIoC (New Zealand Inventory of Chemicals)<br>Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)<br>Japanese Poisonous and Deleterious Substances Control Law<br>Listed on the Canadian IDL (Ingredient Disclosure List) |

## SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

| | |
|---|---|
| Acute Tox. 4 (Dermal) | Acute toxicity (dermal) Category 4 |
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Eye Irrit. 2A | Serious eye damage/eye irritation, Category 2A |
| Repr. 1B | Reproductive toxicity Category 1B |
| Skin Corr. 1A | Skin corrosion/irritation Category 1A |
| Skin Irrit. 2 | Skin corrosion/irritation Category 2 |
| STOT RE 2 | Specific target organ toxicity (repeated exposure) Category 2 |
| H302 | Harmful if swallowed |
| H312 | Harmful in contact with skin |
| H314 | Causes severe skin burns and eye damage |
| H315 | Causes skin irritation |
| H318 | Causes serious eye damage |
| H319 | Causes serious eye irritation |
| H360 | May damage fertility or the unborn child |
| H373 | May cause damage to organs through prolonged or repeated exposure |

SDS Canada (GHS)

*The information presented herein has been compiled from sources considered to be dependable and is accurate to the best of Northland Products Company's knowledge; however, Northland Products Company makes no warranty whatsoever, expressed or implied, of merchantability or fitness for the particular purpose, regarding the accuracy of such data or the results to be obtained from the use thereof. Northland Products Company assumes no responsibility for the injury to the recipient or to third party persons or for any damage to any property and recipient assumes all such risks*

Brenntag Canada Inc.

BRENNTAG

# MATERIAL SAFETY DATA SHEET

**METHANOL**

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Brenntag Canada Inc.
43 Jutland Rd.
Toronto, ON
M8Z 2G6
(416) 259-8231

Website: http://www.brenntag.ca

WHMIS#: 00060463
Index: GCD0167/14A
Effective Date: 2014 January 10
Date of Revision: 2014 January 10

**EMERGENCY TELEPHONE NUMBER (For Emergencies Involving Chemical Spills or Releases)**

**1 855 273 6824**

PRODUCT IDENTIFICATION

| | |
|---|---|
| Product Name: | Methanol. |
| Chemical Name: | Methyl Alcohol. |
| Synonyms: | Methyl Hydrate; Wood Spirit; Carbinol; Colonial Spirit; Columbian Spirit; Methyl Hydroxide; Wood Naphtha; Wood Alcohol; Methanol with Additive; CCS 973 Solvent. |
| Chemical Family: | Alcohol. |
| Molecular Formula: | CH3-OH. |
| Product Use: | Industrial solvent, cleaner, degreaser. Fuel for heaters and wick lamps. Automotive coolant/antifreeze. Chemical intermediate. Lacquer thinner. |

**WHMIS Classification / Symbol:**

B-2: Flammable Liquid
D-1B: Toxic (acute effects)
D-2A: Very Toxic (teratogen)
D-2B: Toxic (skin and eye irritant)

READ THE ENTIRE MSDS FOR THE COMPLETE HAZARD EVALUATION OF THIS PRODUCT.

## 2. COMPOSITION, INFORMATION ON INGREDIENTS (Not Intended As Specifications)

| *Ingredient* | *CAS#* | *ACGIH TLV (TWA)* | *% Concentration* |
|---|---|---|---|
| Methanol | 67-56-1 | 200 ppm (Skin) | 60 - 100 |

Skin Notation: Contact with skin, eyes and mucous membranes can contribute to the overall exposure and may invalidate the TLV. Consider measures to prevent absorption by these routes.

## 3. HAZARDS IDENTIFICATION

| | |
|---|---|
| EMERGENCY OVERVIEW: | Poison. May be fatal or cause blindness if swallowed. Can cause teratogenic effects. Causes eye irritation. Can cause skin irritation. Mists or sprays are irritating to eyes and respiratory tract. At elevated temperatures may cause irritation of the eyes and respiratory tract. See "Other Health Effects" Section. Flammable liquid and vapour. May cause flash fire or explosion. Can decompose at high temperatures forming toxic gases. Contents may develop pressure on prolonged exposure to heat. |

POTENTIAL HEALTH EFFECTS

| | |
|---|---|
| Inhalation: | Contact with mist or spray will cause irritation of mucous membranes, coughing and difficulty in breathing. See "Other Health Effects" Section. |

| | |
|---|---|
| Skin Contact: | Prolonged and repeated contact may lead to dermatitis. May cause defatting, drying and cracking of the skin. Skin contact can cause irritation, especially under the finger nails (and other confined spaces such as under rings or watch bands). |
| Skin Absorption: | May be absorbed through intact skin. |
| Eye Contact: | Vapours from this product are irritating to the eyes. Splashes to the eye may cause irritation, redness and pain. Product residues on fingers, hands or gloves may contact the eyes and cause eye irritation, redness and pain. |
| Ingestion: | This product causes irritation, a burning sensation of the mouth and throat and abdominal pain. |
| Other Health Effects: | Effects (irritancy) on the skin and eyes may be delayed, and damage may occur without the sensation or onset of pain. Strict adherence to first aid measures following any exposure is essential.<br><br>May cause visual disturbances, blindness, photophobia, central nervous system (CNS) depression, liver damage, kidney damage, metabolic acidosis, endocrine effects, systemic poisoning and death. Mild blurring of vision to complete blindness may occur, including changes in colour perception and photophobia. Symptoms usually develop 12-18 hours after exposure. Abnormal sensitivity to light is termed photophobia. CNS depression is characterized by headache, dizziness, drowsiness, nausea, vomiting and incoordination. Severe overexposures may lead to coma and possible death due to respiratory failure. Liver damage is characterized by the loss of appetite, jaundice (yellowish skin colour), and occasional pain in the upper left-hand side of the abdomen. Signs and symptoms of kidney damage generally progress from oliguria, to blood in the urine, to total renal failure. Metabolic acidosis is a condition that describes a decreased pH and bicarbonate concentration in the body fluids. |

## 4. FIRST AID MEASURES

FIRST AID PROCEDURES

| | |
|---|---|
| Inhalation: | Move victim to fresh air. Give artificial respiration ONLY if breathing has stopped. Give cardiopulmonary resuscitation (CPR) if there is no breathing AND no pulse. Obtain medical attention IMMEDIATELY. |
| Skin Contact: | Start flushing while removing contaminated clothing. Wash affected areas thoroughly with soap and water. If irritation, redness, or a burning sensation develops and persists, obtain medical advice. |
| Eye Contact: | Immediately flush eyes with running water for a minimum of 20 minutes. Hold eyelids open during flushing. Take care not to rinse contaminated water into the unaffected eye or onto the face. If irritation persists, repeat flushing. Obtain medical attention IMMEDIATELY. |
| Ingestion: | Do not attempt to give anything by mouth to an unconscious person. If victim is alert and not convulsing, rinse mouth out and give 1/2 to 1 glass of water to dilute material. IMMEDIATELY contact local Poison Control Centre. Vomiting should only be induced under the direction of a physician or a poison control centre. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer more water. IMMEDIATELY transport victim to an emergency facility. |
| Note to Physicians: | This product contains materials that may cause severe pneumonitis if aspirated. If ingestion has occurred less than 2 hours earlier, carry out careful gastric lavage; use endotracheal cuff if available, to prevent aspiration. Observe patient for respiratory difficulty from aspiration pneumonitis. Give artificial resuscitation and appropriate chemotherapy if respiration is depressed.<br><br>When plasma methanol concentrations are higher than 20 mg/dL, when ingested doses are greater than 30 mL, and when there is evidence of acidosis or visual abnormalities, a 10% solution of ethanol in 5% aqueous dextrose, administered intravenously, is a safe, effective antidote. (3)<br><br>Medical conditions that may be aggravated by exposure to this product include neurological and cardiovascular disorders, diseases of the skin, eyes or respiratory tract, preexisting liver and kidney disorders. |

## 5. FIRE-FIGHTING MEASURES

| | | Flammability Limits in Air (%): | |
|---|---|---|---|
| ***Flashpoint (°C)*** | ***AutoIgnition Temperature (°C)*** | ***LEL*** | ***UEL*** |
| 11 (3) | 464 (3) | 6 (3, 4) | 36.5 (3) |

| | |
|---|---|
| Flammability Class (WHMIS): | B-2: Flammable Liquid |
| Hazardous Combustion Products: | Thermal decomposition products are toxic and may include formaldehyde and oxides of carbon. |

| | |
|---|---|
| Unusual Fire or Explosion Hazards: | Vapours from this product are heavier than air, and may "travel" to a source of ignition (eg. pilot lights, heaters, electric motors) some distance away, and then "flash back" to the point of product discharge causing an explosion and fire. Closed containers exposed to heat may explode. Spilled material may cause floors and contact surfaces to become slippery. |
| Sensitivity to Mechanical Impact: | Not expected to be sensitive to mechanical impact. |
| Rate of Burning: | Not available. |
| Explosive Power: | Not available. |
| Sensitivity to Static Discharge: | Expected to be sensitive to static discharge when vapours are present between the lower and upper explosive limits. |
| EXTINGUISHING MEDIA | |
| Fire Extinguishing Media: | Use carbon dioxide or dry chemical media for small fires. If only water is available, use it in the form of a fog. This material may produce a floating fire hazard in extreme fire conditions. |
| FIRE FIGHTING INSTRUCTIONS | |
| Instructions to the Fire Fighters: | Use water spray to cool fire-exposed containers or structures. Use water spray to disperse vapours; re-ignition is possible. |
| Fire Fighting Protective Equipment: | Use self-contained breathing apparatus and protective clothing. |

## 6. ACCIDENTAL RELEASE MEASURES

Information in this section is for responding to spills, leaks or releases in order to prevent or minimize the adverse effects on persons, property and the environment. There may be specific reporting requirements associated with spills, leaks or releases, which change from region to region.

| | |
|---|---|
| Containment and Clean-Up Procedures: | In all cases of leak or spill contact vendor at Emergency Number shown on the front page of this MSDS. Wear protective clothing. Do not use combustible materials such as sawdust as an absorbent. Eliminate all sources of ignition. Collect product for recovery or disposal. For release to land, or storm water runoff, contain discharge by constructing dykes or applying inert absorbent; for release to water, utilize damming and/or water diversion to minimize the spread of contamination. Ventilate enclosed spaces. Notify applicable government authority if release is reportable or could adversely affect the environment. |

## 7. HANDLING AND STORAGE

| | |
|---|---|
| HANDLING | |
| Handling Practices: | Ground and bond equipment and containers to prevent a static charge buildup. Use spark-resistant tools and avoid "splash-filling" of containers. Use normal "good" industrial hygiene and housekeeping practices. Containers exposed to heat may be under internal pressure. These should be cooled and carefully vented before opening. A face shield and apron should be worn. Vent container frequently, and more often in warm weather, to relieve pressure. Absorption via contact with skin, eyes and mucous membranes can contribute to the overall exposure. Consider measures to prevent absorption by these routes. |
| Ventilation Requirements: | See Section 8, "Engineering Controls". |
| Other Precautions: | Use only with adequate ventilation and avoid breathing vapours and aerosols. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. Wash contaminated clothing thoroughly before re-use. Do not use cutting or welding torches on empty drums that contained this material/product. Store wiping rags and similar material in metal cans with tight fitting lids. Enforce NO SMOKING rules in area of use. |
| STORAGE | |
| Storage Temperature (°C): | See below. |
| Ventilation Requirements: | Ventilation should be explosion proof. |
| Storage Requirements: | Store in a cool, well-ventilated area. Keep away from heat, sparks and flames. Keep containers closed. Do not expose sealed containers to temperatures above 40° C. Avoid moisture contamination. Protect from direct sunlight. Protect against physical damage. |
| Special Materials to be Used for Packaging or Containers: | Equipment for storage, handling or transport should NOT be made from the following material, or, where applicable, its alloys: lead, nickel, cast iron, copper, zinc, galvanized steel or aluminum. Confirm suitability of any material before using. |

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Recommendations listed in this section indicate the type of equipment, which will provide protection against overexposure to this product. Conditions of use, adequacy of engineering or other control measures, and actual exposures will dictate the need for specific protective devices at your workplace.

ENGINEERING CONTROLS

Engineering Controls: Local exhaust ventilation required. Ventilation should be explosion proof. Make up air should be supplied to balance air that is removed by local or general exhaust ventilation. Ventilate low lying areas such as sumps or pits where dense vapours may collect.

For personnel entry into confined spaces (i.e. bulk storage tanks) a proper procedure must be followed. It must include consideration of, among other things, ventilation, testing of tank atmosphere, provision and maintenance of SCBA, and emergency rescue. Use the "buddy" system. The second person should be in view and trained and equipped to execute a rescue. (6)

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Eye Protection: Safety glasses with side shields are recommended to prevent eye contact. Use chemical safety goggles when there is potential for eye contact. Contact lenses should not be worn when working with this material.

Skin Protection: Gloves and protective clothing made from butyl rubber or viton should be impervious under conditions of use. Prior to use, user should confirm impermeability. Do not use gloves or protective clothing made from natural rubber, neoprene, nitrile rubber or polyvinyl alcohol (PVA). Discard contaminated gloves.

Respiratory Protection: A NIOSH/MSHA-approved air-purifying respirator equipped with organic vapour cartridges for concentrations up to 200 ppm. A NIOSH/MSHA-approved full facepiece air-supplied respirator if concentrations are higher or unknown.

If while wearing a respiratory protection, you can smell, taste or otherwise detect anything unusual, or in the case of a full facepiece respirator you experience eye irritation, leave the area immediately. Check to make sure the respirator to face seal is still good. If it is, replace the filter, cartridge or canister. If the seal is no longer good, you may need a new respirator. (6)

Methanol: Immediately Dangerous to Life and Health (IDLH) value: 6 000 ppm. The purpose of establishing an IDLH value is to ensure that the worker can escape from a given contaminated environment in the event of failure of the most protective respiratory equipment. In the event of failure of respiratory protective equipment, every effort should be made to exit immediately. (4)

Other Personal Protective Equipment: Wear an impermeable apron and boots. Locate safety shower and eyewash station close to chemical handling area. Take all precautions to avoid personal contact.

Clothing and footwear that is fire retardant and dissipates static electrical charges should be worn when handling flammable materials. Natural fibers (cotton, wool, leather and linen) should be selected in favour of synthetic materials (rayon, nylon and polyester).

Skin Notation: Contact with skin, eyes and mucous membranes can contribute to the overall exposure and may invalidate the TLV. Consider measures to prevent absorption by these routes.

EXPOSURE GUIDELINES

| ***SUBSTANCE*** | ***ACGIH TLV*** | ***OSHA PEL*** | | ***NIOSH REL*** | |
|---|---|---|---|---|---|
| | ***(STEL)*** | ***(TWA)*** | ***(STEL)*** | ***(TWA)*** | ***(STEL)*** |
| Methanol | 250 ppm (Skin) | 200 ppm | --- | 200 ppm (Skin) | 250 ppm (Skin) |

## 9. PHYSICAL AND CHEMICAL PROPERTIES (Not intended as Specifications)

| | |
|---|---|
| Physical State: | Liquid. |
| Appearance: | Clear, colourless liquid. |
| Odour: | Mild alcohol odour. |
| Odour Threshold (ppm): | 4.2 - 5 960. (3) |
| Boiling Range (°C): | 64.7. (3) |
| Melting/Freezing Point (°C): | - 97.8. (3) |
| Vapour Pressure (mm Hg at 20° C): | 96. (3) |
| Vapour Density (Air = 1.0): | 1.11. (3) |
| Relative Density (g/cc): | 0.791 - 0.793. (3) |

| | |
|---|---|
| Bulk Density: | Not available. |
| Viscosity: | Not available. |
| Evaporation Rate (Butyl Acetate = 1.0): | 4.1. (3) |
| Solubility: | Soluble in water. Hygroscopic (readily absorbs water). |
| % Volatile by Volume: | 100. |
| pH: | Not applicable. |
| Coefficient of Water/Oil Distribution: | < 0. (3) |
| Volatile Organic Compounds (VOC): | 100. |
| Flashpoint (°C): | 11 (3) |

## 10. STABILITY AND REACTIVITY

CHEMICAL STABILITY

| | |
|---|---|
| Under Normal Conditions: | Stable. |
| Under Fire Conditions: | Flammable. |
| Hazardous Polymerization: | Will not occur. |
| Conditions to Avoid: | High temperatures, sparks, open flames and all other sources of ignition. |
| Materials to Avoid: | Strong oxidizers. Lewis or mineral acids. Sulphuric Acid. Hydrogen Peroxide. Lead. Aluminum and its alloys. Magnesium. Platinum. Nickel. Cast Iron. Copper and its alloys. Zinc and its alloys. Galvanized Steel.<br><br>Mixtures or reactions of alcohols with the following materials may cause explosions: barium perchlorate, chlorine, hypochlorous acid, ethylene oxide, hexamethylene diisocyanate and other isocyanates, nitrogen tetroxide, permonosulfuric acid and tri-isobutyl aluminum. (4) |
| Decomposition or Combustion Products: | Thermal decomposition products are toxic and may include formaldehyde and oxides of carbon. |

## 11. TOXICOLOGICAL INFORMATION

***TOXICOLOGICAL DATA:***

| ***SUBSTANCE*** | ***LD50 (Oral, Rat)*** | ***LD50 (Dermal, Rabbit)*** | ***LC50 (Inhalation, Rat, 4h)*** |
|---|---|---|---|
| Methanol | 5 600 mg/kg (1) | 15 800 mg/kg (1) | 64 000 ppm (1) |

| | |
|---|---|
| Carcinogenicity Data: | The ingredient(s) of this product is (are) not classed as carcinogenic by ACGIH, IARC, OSHA or NTP. |
| Reproductive Data: | No adverse reproductive effects are anticipated. |
| Mutagenicity Data: | No adverse mutagenic effects are anticipated. |
| Teratogenicity Data: | Methanol may cause teratogenic/embryotoxic effects based on studies in laboratory animals. See "Other Studies Relevant to Material". |
| Respiratory / Skin Sensitization Data: | None known. |
| Synergistic Materials: | Alcohols may interact synergistically with chlorinated solvents (example - carbon tetrachloride, chloroform, bromotrichloromethane), dithiocarbamates (example - disulfiram), dimethylnitrosamine and thioacetamide. (6) |

Other Studies Relevant to Material:

Methanol caused moderate skin and eye irritation in animal tests. A well-conducted oral study using rats suggests that methanol may be carcinogenic, but further studies are required before firm conclusions can be drawn. Limited inhalation studies using mice, rats and monkeys have not shown carcinogenicity. (4)

Methanol has produced fetotoxicity in rats and teratogenicity in mice exposed by inhalation to high concentrations that did no produce significant maternal toxicity. Mice were exposed by inhalation to 1000, 2000, 5000, 7500, 10000, or 15000 ppm of days 6-15 of pregnancy (7 hr/d). No visible signs of maternal toxicity were noted, but 1/30-40 mothers died in each group exposed to 7500 ppm and above. There was a dose-related significant decrease in the number of live pups/litter (post implantation mortality) at 7500 ppm and above. A significant increase in malformations (e.g. cleft palate, exencephaly, skeletal anomalies) was observed at 5000 ppm and above. Fetal body weights were significantly reduced at 10000 ppm and higher. (4)

The pathologic changes found in the tissues of animals exposed by inhalation to Methyl Alcohol are quite similar to those observed in animals following ingestion of this compound. In the eyes of dogs, hyperemia (increased amount of blood) of the choroid and edema of the ocular tissue with early signs of degeneration of the ganglionic cells of the retina and nerve fibers were found. The blood vessels of the choroid in poisoned animals were markedly congested, the entire retina was edematous and the ganglion cells were degenerated. Hemorrhage, edema, congestion and pneumonia were observed in the lungs of the various species that were exposed to vapours containing Methyl Alcohol. The livers and kidneys showed congestion, albuminous and fatty acid degeneration and fatty infiltration. Cardiac dilation and myocardial degeneration were observed in the hearts of the animals. (4)

The effects of alcohol on hearing were studied in the rat by examining the modification of the acoustic startle reflexes by pure tone pulses and by gaps in white noise. Groups of rats received four injections of 0. 0.25, 1 and 2 g/Kg of Methyl Alcohol or Ethyl Alcohol in increasing order at one hour intervals, loudness perception or temporal acuity was tested after 30 minutes. Both alcohols produced a dose dependent reduction in baseline startle amplitude that was greater during exposure Ethanol than in Methanol. Loudness functions associated with pulse intensity were not diminished by the alcohols, however inhibition produced by gap in noise reduced following the highest dose of either alcohol. (4)

Mature male rats were examined for alterations in circulating free testosterone, luteinizing hormone and follicle stimulating hormone after inhalation of Methanol vapour for six weeks at doses ranging from 200 ppm to 10,000 ppm. The most extensive effects were noticed after exposure to 200 ppm Methanol for six weeks, with serum levels of testosterone being 32 % of the controls. A significant change in luteinizing hormone concentration after exposure to 10,000 ppm of methanol for six weeks was also demonstrated while follicle stimulating and the elimination of testosterone from the blood remained unchanged throughout the experiment. (4)

The result of skin absorption experiments were described by stating that all animals subjected to the action of any amount of Methanol by skin absorption has died. The lowest lethal does was 0.5 ml / Kg for one monkey. It was reported that rabbits were far less susceptible to Methyl Alcohol poisoning by this route than monkeys or rats. In a study of the effects of continuous exposure to methanol, a known amount was dropped onto or injected into the gauze pads 4 times / day. All such treated monkeys displayed dilated pupils within 2 hours after one such administration of 1.3 mg / Kg Methanol. The minimum lethal dose was a total of four administrations of 0.5 ml / Kg of Methanol in one day. It was concluded that sufficient amounts of Methanol can be absorbed through the skin and that the threshold for immediate danger to monkeys was below the minimum lethal dose. (4)

A negative consensus resulted from all sister chromatid exchange tests when no exogenous metabolic activation system was used. A negative consensus resulted from both cell transformation in primary cells using limited lifetime strains and cell transformation via viral enhancement tests when no exogenous activation system was used. A negative consensus resulted from all Neurospera crassa tests when no exogenous metabolic activation system was used. (4)

## 12. ECOLOGICAL INFORMATION

Ecotoxicity:

Methanol:
96-hour LC50 (Pimephales promelas) = 28 g/L. (3)
96-hour LC50 (Lepomis macrochirus) = 15.4 g/L. (3)
48-hour EC50 (Daphnia magna) = 24.5 g/L. (3)

Environmental Fate:

If released to the atmosphere, methanol degrades via reactions with photochemically produced hydroxyl radicals with an approximate half-life of 17.8 days. Physical removal from air can occur via rainfall. If released to water, decomposition via biodegradation is expected to occur. If released to soil, methanol is expected to degrade via biodegradation and be susceptible to leaching. (4)

Can be dangerous if allowed to enter drinking water intakes. Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds, or rivers.

## 13. DISPOSAL CONSIDERATIONS

| | |
|---|---|
| Deactivating Chemicals: | None required. |
| Waste Disposal Methods: | Dispose of waste material at an approved (hazardous) waste treatment/disposal facility in accordance with applicable local, provincial and federal regulations. Do not dispose of waste with normal garbage, or to sewer systems. Reevaluation of the product may be required by the user at the time of disposal since the product uses, transformations, mixtures and processes may influence waste classification. |
| Safe Handling of Residues: | See "Waste Disposal Methods". |
| Disposal of Packaging: | Empty containers retain product residue and can be dangerous. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. Do not expose such containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death. Do not dispose of package until thoroughly washed out. |

## 14. TRANSPORTATION INFORMATION

**CANADIAN TDG ACT SHIPPING DESCRIPTION:**

METHANOL, Class 3(6.1), UN1230, PG II.

Label(s): Flammable Liquids, Toxic Substances. Placard: Flammable Liquids.

ERAP Index: -----. Exemptions: None known.

**US DOT CLASSIFICATION (49CFR 172.101, 172.102):**

METHANOL, Class 3(6.1), UN1230, PG II.

Label(s): Flammable Liquid, Poison. Placard: Flammable Liquid.

CERCLA-RQ: Methanol: 5 000 lb / 2 270 Kg. Exemptions: Not applicable.

## 15. REGULATORY INFORMATION

**CANADA**

CEPA - NSNR: This material is included on the DSL under the CEPA.

CEPA - NPRI: Methanol.

Controlled Products Regulations Classification (WHMIS):

B-2: Flammable Liquid
D-1B: Toxic (acute effects)
D-2A: Very Toxic (teratogen)
D-2B: Toxic (skin and eye irritant)

**USA**

Environmental Protection Act: This material is included on the TSCA Inventory.

OSHA HCS (29CFR 1910.1200): Flammable Liquid. Toxic. Teratogenic and Embryotoxic. Skin and Eye Irritant.

NFPA: 1 Health, 3 Fire, 0 Reactivity (3)

HMIS: 2 Health, 3 Fire, 0 Reactivity (3)

**INTERNATIONAL**

This product or its components are on the European inventory of existing commercial chemicals (EINECS).

## 16. OTHER INFORMATION

REFERENCES

1. RTECS-Registry of Toxic Effects of Chemical Substances, Canadian Centre for Occupational Health and Safety RTECS database.
2. Clayton, G.D. and Clayton, F.E., Eds., Patty's Industrial Hygiene and Toxicology, 3rd ed., Vol. IIA,B,C, John Wiley and Sons, New York, 1981.

3. Supplier's Material Safety Data Sheet(s).
4. CHEMINFO chemical profile, Canadian Centre for Occupational Health and Safety, Hamilton, Ontario, Canada.
5. Guide to Occupational Exposure Values, 2011, American Conference of Governmental Industrial Hygienists, Cincinnati, 2011.
6. Regulatory Affairs Group, Brenntag Canada Inc.
7. The British Columbia Drug and Poison Information Centre, Poison Managements Manual, Canadian Pharmaceutical Association, Ottawa, 1981.

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To obtain revised copies of this or other Material Safety Data Sheets, contact your nearest Brenntag Canada Regional office.

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Phone: (780) 986-4544 Facsimile: (780) 986-1070

Manitoba: 681 Plinquet Street, Winnipeg, MB, R2J 2X2
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Ontario: 43 Jutland Road, Toronto, ON, M8Z 2G6
Phone: (416) 259-8231 Facsimile: (416) 259-5333

Quebec: 2900 Jean Baptiste Des., Lachine, PQ, H8T 1C8
Phone: (514) 636-9230 Facsimile: (514) 636-0877

Atlantic: A-105 Akerley Boulevard, Dartmouth, NS, B3B 1R7
Phone: (902) 468-9690 Facsimile: (902) 468-3085

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Prepared By: Regulatory Affairs Group, Brenntag Canada Inc., (416) 259-8231.

# Material Safety Data Sheet


## 1 - Chemical Product and Company Identification

| | |
|---|---|
| **Manufacturer: WD-40 Company**<br>**Address: 1061 Cudahy Place (92110)**<br>**P.O. Box 80607**<br>**San Diego, California, USA**<br>**92138 –0607**<br>**Telephone:**<br>**Emergency only: 1-888-324-7596 (PROSAR)**<br>**Information: 1-888-324-7596**<br>**Chemical Spills: 1-800-424-9300 (Chemtrec)**<br>**1-703-527-3887 (International Calls)** | **Chemical Name: Organic Mixture**<br><br>**Trade Name: WD-40 Bulk Liquid**<br><br>**Product Use: Lubricant, Penetrant, Drives Out Moisture, Removes and Protects Surfaces From Corrosion**<br><br>**MSDS Date Of Preparation: 3/11/10** |

## 2 – Hazards Identification

**Emergency Overview:**
**DANGER**! Harmful or fatal if swallowed. Combustible Liquid. If swallowed, may be aspirated and cause lung damage. May cause eye irritation. Avoid eye contact. Use with adequate ventilation. Keep away from heat, sparks and all other sources of ignition.

**Symptoms of Overexposure:**
**Inhalation:** High concentrations may cause nasal and respiratory irritation and central nervous system effects such as headache, dizziness and nausea. Intentional abuse may be harmful or fatal.
**Skin Contact:** Prolonged and/or repeated contact may produce mild irritation and defatting with possible dermatitis.
**Eye Contact:** Contact may be irritating to eyes. May cause redness and tearing.
**Ingestion:** This product has low oral toxicity. Swallowing may cause gastrointestinal irritation, nausea, vomiting and diarrhea. This product is an aspiration hazard. If swallowed, can enter the lungs and may cause chemical pneumonitis, severe lung damage and death.
**Chronic Effects:** None expected.
**Medical Conditions Aggravated by Exposure:** Preexisting eye, skin and respiratory conditions may be aggravated by exposure.

**Suspected Cancer Agent:**
Yes No X

## 3 - Composition/Information on Ingredients

| Ingredient | CAS # | Weight Percent |
|---|---|---|
| Aliphatic Hydrocarbon | 64742-47-8 | 45-50 |
| Petroleum Base Oil | 64742-58-1<br>64742-53-6<br>64742-56-9<br>64742-65-0 | <25 |
| LVP Aliphatic Hydrocarbon | 64742-47-8 | 12-18 |
| Surfactant | Proprietary | <2 |
| Non-Hazardous Ingredients | Mixture | <10 |

**See Section 8 for Exposure Limits**

## 4 – First Aid Measures

**Ingestion (Swallowed):** Aspiration Hazard. DO NOT induce vomiting. Call physician, poison control center or the WD-40 Safety Hotline at 1-888-324-7596 immediately.

**Eye Contact:** Flush thoroughly with water. Remove contact lenses if present after the first 5 minutes and continue flushing for several more minutes. Get medical attention if irritation persists.
**Skin Contact:** Wash with soap and water. If irritation develops and persists, get medical attention.
**Inhalation (Breathing):** If irritation is experienced, move to fresh air. Get medical attention if irritation or other symptoms develop and persist.

**5 – Fire Fighting Measures**

**Extinguishing Media:** Use water fog, dry chemical, carbon dioxide or foam. Do not use water jet or flooding amounts of water. Burning product will float on the surface and spread fire.
**Special Fire Fighting Procedures**: Firefighters should always wear positive pressure self-contained breathing apparatus and full protective clothing. Cool fire-exposed containers with water.
**Unusual Fire and Explosion Hazards**: Combustible liquid and vapor. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back.

**6 – Accidental Release Measures**

Wear appropriate protective clothing (see Section 8). Eliminate all sources of ignition and ventilate area. Contain and collect liquid with an inert absorbent and place in a container for disposal. Clean spill area thoroughly. Report spills to authorities as required.

**7 – Handling and Storage**

**Handling:** Avoid contact with eyes. Avoid prolonged contact with skin. Avoid breathing vapors or aerosols. Use with adequate ventilation. Keep away from heat, sparks, hot surfaces and open flames. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Keep out of the reach of children.
**Storage:** Store in a cool, well-ventilated area, away from incompatible materials. NFPA 30 Class II Liquid.

**8 – Exposure Controls/Personal Protection**

| Chemical | Occupational Exposure Limits |
|---|---|
| Aliphatic Hydrocarbon | 1200 mg/m3 TWA (manufacturer recommended) |
| Petroleum Base Oil | 5 mg/m3 (inhalable) TWA<br>5 mg/m3 TWA OSHA PEL |
| LVP Aliphatic Hydrocarbon | 1200 mg/m3 TWA (manufacturer recommended) |
| Surfactant | None Established |
| Non-Hazardous Ingredients | None Established |

**The Following Controls are Recommended for Normal Consumer Use of this Product**
**Engineering Controls:** Use in a well-ventilated area.
**Personal Protection:**
**Eye Protection:** Avoid eye contact. Safety glasses or goggles recommended.
**Skin Protection:** Avoid prolonged skin contact. Chemical resistant gloves recommended for operations where skin contact is likely.
**Respiratory Protection:** None needed for normal use with adequate ventilation.

**For Bulk Processing or Workplace Use the Following Controls are Recommended**
**Engineering Controls:** Use adequate general and local exhaust ventilation to maintain exposure levels below that occupational exposure limits.
**Personal Protection:**
**Eye Protection:** Safety goggles recommended where eye contact is possible.
**Skin Protection:** Wear chemical resistant gloves.
**Respiratory Protection:** None required if ventilation is adequate. If the occupational exposure limits are exceeded, wear a NIOSH approved respirator. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134, ANSI Z88.2 and good Industrial Hygiene practice.
**Work/Hygiene Practices:** Wash with soap and water after handling.

**9 – Physical and Chemical Properties**

| | | | |
|---|---|---|---|
| Boiling Point: | 361 - 369°F (183 - 187°C) | Specific Gravity: | 0.8 – 0.82 @ 60°F |
| Solubility in Water: | Insoluble | pH: | Not Applicable |
| Vapor Pressure: | 1 psi @38°C (100°F) ASTM D323 | Vapor Density: | Greater than 1 |
| Percent Volatile: | 70-75% | VOC: | 412 grams/liter (49.5%) |
| Coefficient of Water/Oil Distribution: | Not Determined | Appearance/Odor | Light amber liquid/mild odor |
| Flash Point: | 122°F (49°C) Tag Open Cup | Flammable Limits: (Solvent Portion) | LEL: 0.6% UEL: 8.0% |
| Pour Point: | -63°C (-81.4°F ) ASTM D-97 | Kinematic Viscosity: | 2.79-2.96cSt @ 100°F |

**10 – Stability and Reactivity**

**Stability:** Stable
**Hazardous Polymerization:** Will not occur.
**Conditions to Avoid:** Avoid heat, sparks, flames and other sources of ignition.
**Incompatibilities:** Strong oxidizing agents.
**Hazardous Decomposition Products:** Carbon monoxide and carbon dioxide.

**11 – Toxicological Information**

The oral toxicity of this product is estimated to be greater than 5,000 mg/kg based on an assessment of the ingredients. This product is not classified as toxic by established criteria. It is an aspiration hazard.
None of the components of this product is listed as a carcinogen or suspected carcinogen or is considered a reproductive hazard.

**12 – Ecological Information**

No data is currently available.

**13 - Disposal Considerations**

If this product becomes a waste, it would be expected to meet the criteria of a RCRA ignitable hazardous waste (D001). However, it is the responsibility of the generator to determine at the time of disposal the proper classification and method of disposal. Dispose in accordance with federal, state, and local regulations.

**14 – Transportation Information_**

DOT Surface Shipping Description: Excepted from Hazmat (49CFR 173.150 (F)) in non-bulk packagings. Bulk Packagings: NA1993, Combustible Liquid, n.o.s. (contains Petroleum Distillates), PG III
IMDG Shipping Description: UN1268, Petroleum Distillates, n.o.s. 3, PG III

**15 – Regulatory Information**

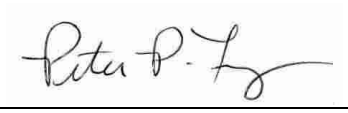
**U.S. Federal Regulations**:
**CERCLA 103 Reportable Quantity:** This product is not subject to CERCLA reporting requirements, however, oil spills are reportable to the National Response Center under the Clean Water Act and many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.
**SARA TITLE III**:
**Hazard Category For Section 311/312:** Acute Health, Fire Hazard
**Section 313 Toxic Chemicals**: This product contains the following chemicals subject to SARA Title III
Section 313 Reporting requirements: None
Section 302 Extremely Hazardous Substances (TPQ): None

**EPA Toxic Substances Control Act (TSCA) Status**: All of the components of this product are listed on the TSCA inventory
**California Safe Drinking Water and Toxic Enforcement Act (Proposition 65**): This product does not contain chemicals regulated under California Proposition 65.
**VOC Regulations**: This product complies with the consumer product VOC limits of CARB, the US EPA and states adopting the OTC VOC rules.
**Canadian Environmental Protection Act**: One of the components is listed on the NDSL. All of the other ingredients are listed on the Canadian Domestic Substances List or exempt from notification.
**Canadian WHMIS Classification**: Class B-3 (Combustible Liquid)
This MSDS has been prepared according to the criteria of the Controlled Products Regulation (CPR) and the MSDS contains all of the information required by the CPR.

**16 – Other Information:**

**HMIS Hazard Rating:**
**Health – 1 (slight hazard), Fire Hazard – 2 (moderate hazard), Reactivity – 0 (minimal hazard)**

Revision Date: March 2010 Supercedes: January 2010



SIGNATURE:_____ TITLE: Director of Global Quality Assurance

REVISION DATE: March 2010 SUPERSEDES: August 2009

# SAFETY DATA SHEET

## 1. Identification

| | |
|---|---|
| **Product identifier** | **Brakleen® Brake Parts Cleaner** |
| **Other means of identification** | |
| **Product code** | 05089, 05089T, 85089, 85089AZ |
| **Recommended use** | Brake cleaner |
| **Recommended restrictions** | None known. |

**Manufacturer/Importer/Supplier/Distributor information**

**Manufactured or sold by:**

| | |
|---|---|
| **Company name** | CRC Industries, Inc. |
| **Address** | 885 Louis Dr.<br>Warminster, PA 18974 US |
| **Telephone** | |
| **General Information** | 215-674-4300 |
| **Technical Assistance** | 800-521-3168 |
| **Customer Service** | 800-272-4620 |
| **24-Hour Emergency (CHEMTREC)** | 800-424-9300 (US)<br>703-527-3887 (International) |
| **Website** | www.crcindustries.com |

## 2. Hazard(s) identification

| | | |
|---|---|---|
| **Physical hazards** | Gases under pressure | Compressed gas |
| **Health hazards** | Skin corrosion/irritation | Category 2 |
| | Carcinogenicity | Category 1B |
| | Specific target organ toxicity, single exposure | Category 3 narcotic effects |
| **Environmental hazards** | Hazardous to the aquatic environment, long-term hazard | Category 2 |
| **OSHA defined hazards** | Not classified. | |

**Label elements**

| | |
|---|---|
| **Signal word** | Danger |
| **Hazard statement** | Contains gas under pressure; may explode if heated. Causes skin irritation. May cause drowsiness or dizziness. May cause cancer. Toxic to aquatic life with long lasting effects. |

**Precautionary statement**

| | |
|---|---|
| **Prevention** | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 49°C/120°F. Use with adequate ventilation. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Avoid breathing mist or vapor. Avoid breathing gas. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment. |
| **Response** | If on skin: Wash with plenty of water. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If exposed or concerned: Get medical attention. Collect spillage. |
| **Storage** | Store locked up. Protect from sunlight. Store in a well-ventilated place. Exposure to high temperature may cause can to burst. |

| | |
|---|---|
| **Disposal** | Dispose of contents/container in accordance with local/regional/national regulations. |
| **Hazard(s) not otherwise classified (HNOC)** | None known. |

**Supplemental information**

When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen chloride and possibly phosgene.

## 3. Composition/information on ingredients

**Mixtures**

| Chemical name | Common name and synonyms | CAS number | % |
|---|---|---|---|
| Tetrachloroethylene | Perchloroethylene | 127-18-4 | 90 - 100 |
| Carbon dioxide | | 124-38-9 | 1 - 5 |

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

## 4. First-aid measures

| | |
|---|---|
| **Inhalation** | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. |
| **Skin contact** | Remove contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse. |
| **Eye contact** | Rinse with water. Get medical attention if irritation develops and persists. |
| **Ingestion** | In the unlikely event of swallowing contact a physician or poison control center. Rinse mouth. |
| **Most important symptoms/effects, acute and delayed** | May cause drowsiness and dizziness. Headache. Nausea, vomiting. Irritation of eyes and mucous membranes. Irritation of nose and throat. Skin irritation. May cause redness and pain. |
| **Indication of immediate medical attention and special treatment needed** | Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed. |
| **General information** | IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. |

## 5. Fire-fighting measures

| | |
|---|---|
| **Suitable extinguishing media** | Dry chemical, CO2, or water spray. |
| **Unsuitable extinguishing media** | Do not use water jet as an extinguisher, as this will spread the fire. |
| **Specific hazards arising from the chemical** | Contents under pressure. Exposure to high temperature may cause can to burst. When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen chloride and possibly phosgene. |
| **Special protective equipment and precautions for firefighters** | Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. |
| **Fire fighting equipment/instructions** | In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. |

## 6. Accidental release measures

| | |
|---|---|
| **Personal precautions, protective equipment and emergency procedures** | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Avoid breathing gas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS. |
| **Methods and materials for containment and cleaning up** | Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways. Stop the flow of material, if this is without risk. Collect spillage. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS. |
| **Environmental precautions** | Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground. |

## 7. Handling and storage

**Precautions for safe handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Use with adequate ventilation. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. Avoid breathing mist or vapor. Avoid breathing gas. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Use only in well-ventilated areas. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Avoid release to the environment. Do not empty into drains. For product usage instructions, please see the product label.

**Conditions for safe storage, including any incompatibilities**

Level 1 Aerosol.

Contents under pressure. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 49 °C/120 °F. Do not handle or store near an open flame, heat or other sources of ignition. Exposure to high temperature may cause can to burst. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

**Occupational exposure limits**

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

| Components | Type | Value |
|---|---|---|
| Carbon dioxide (CAS 124-38-9) | PEL | 9000 mg/m3 |
| | | 5000 ppm |

**US. OSHA Table Z-2 (29 CFR 1910.1000)**

| Components | Type | Value |
|---|---|---|
| Tetrachloroethylene (CAS 127-18-4) | Ceiling | 200 ppm |
| | TWA | 100 ppm |

**US. ACGIH Threshold Limit Values**

| Components | Type | Value |
|---|---|---|
| Carbon dioxide (CAS 124-38-9) | STEL | 30000 ppm |
| | TWA | 5000 ppm |
| Tetrachloroethylene (CAS 127-18-4) | STEL | 100 ppm |
| | TWA | 25 ppm |

**US. NIOSH: Pocket Guide to Chemical Hazards**

| Components | Type | Value |
|---|---|---|
| Carbon dioxide (CAS 124-38-9) | STEL | 54000 mg/m3 |
| | | 30000 ppm |
| | TWA | 9000 mg/m3 |
| | | 5000 ppm |

**Biological limit values**

**ACGIH Biological Exposure Indices**

| Components | Value | Determinant | Specimen | Sampling Time |
|---|---|---|---|---|
| Tetrachloroethylene (CAS 127-18-4) | 0.5 mg/l | Tetrachloroethylene | Blood | * |
| | 3 ppm | Tetrachloroethylene | End-exhaled air | * |

* - For sampling details, please see the source document.

**Exposure guidelines**

**US - Minnesota Haz Subs: Skin designation applies**

| | |
|---|---|
| Tetrachloroethylene (CAS 127-18-4) | Skin designation applies. |

**Appropriate engineering controls** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower should be available when handling this product.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin protection**

**Hand protection** Wear protective gloves such as: Viton®. Polyvinyl alcohol (PVA). Nitrile. Silver Shield®

**Other** Wear appropriate chemical resistant clothing.

**Respiratory protection** If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations** When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

**Appearance**

**Physical state** Liquid.

**Form** Aerosol.

**Color** Colorless.

**Odor** Irritating.

**Odor threshold** 50 ppm

**pH** Not available.

**Melting point/freezing point** -8.1 °F (-22.3 °C) estimated

**Initial boiling point and boiling range** 250.3 °F (121.3 °C) estimated

**Flash point** None (Tag Closed Cup)

**Evaporation rate** Very fast.

**Flammability (solid, gas)** Not available.

**Upper/lower flammability or explosive limits**

**Flammability limit - lower (%)** Not available.

**Flammability limit - upper (%)** Not available.

**Vapor pressure** 1352.4 hPa estimated

**Vapor density** 5.76 (air = 1)

**Relative density** 1.62

**Solubility (water)** 0.02 % (77 °F (25 °C))

**Partition coefficient (n-octanol/water)** Not available.

**Auto-ignition temperature** Not available.

**Decomposition temperature** Not available.

**Viscosity (kinematic)** Not available.

**Percent volatile** 97.7 % estimated

**Other information**

**Partition coefficient (oil/water)** 2.88

## 10. Stability and reactivity

| | |
|---|---|
| **Reactivity** | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| **Chemical stability** | Material is stable under normal conditions. |
| **Possibility of hazardous reactions** | No dangerous reaction known under conditions of normal use. |
| **Conditions to avoid** | Heat, flames and sparks. Contact with incompatible materials.<br>When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen chloride and possibly phosgene. |
| **Incompatible materials** | Strong oxidizing agents. Strong acids. Strong bases. |
| **Hazardous decomposition products** | Hydrogen chloride. Trace amounts of chlorine and phosgene. Carbon oxides. Halogenated materials. Carbonyl halides. |

## 11. Toxicological information

**Information on likely routes of exposure**

| | |
|---|---|
| **Inhalation** | Prolonged inhalation may be harmful. May cause drowsiness and dizziness. Headache. Nausea, vomiting. |
| **Skin contact** | Causes skin irritation. |
| **Eye contact** | Direct contact with eyes may cause temporary irritation. |
| **Ingestion** | Ingestion of large amounts may produce gastrointestinal disturbances including irritation, nausea, and diarrhea. |
| **Symptoms related to the physical, chemical and toxicological characteristics** | May cause drowsiness and dizziness. Headache. Nausea, vomiting. Irritation of nose and throat. Irritation of eyes and mucous membranes. Skin irritation. May cause redness and pain. |

**Information on toxicological effects**

**Acute toxicity** Narcotic effects.

| Product | Species | Test Results |
|---|---|---|
| Brakleen® Brake Parts Cleaner | | |
| **Acute** | | |
| **Dermal** | | |
| LD50 | Rabbit | 3305 mg/kg estimated |
| **Inhalation** | | |
| LC50 | Rat | 20 mg/l, 4 Hours estimated |
| **Oral** | | |
| LD50 | Rat | 2692 mg/kg estimated |

* Estimates for product may be based on additional component data not shown.

| | |
|---|---|
| **Skin corrosion/irritation** | Causes skin irritation. |
| **Serious eye damage/eye irritation** | Direct contact with eyes may cause temporary irritation. |
| **Respiratory sensitization** | Not available. |
| **Skin sensitization** | This product is not expected to cause skin sensitization. |
| **Germ cell mutagenicity** | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. |
| **Carcinogenicity** | May cause cancer. |

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Tetrachloroethylene (CAS 127-18-4) 2A Probably carcinogenic to humans.

**US. National Toxicology Program (NTP) Report on Carcinogens**

Tetrachloroethylene (CAS 127-18-4) Reasonably Anticipated to be a Human Carcinogen.

| | |
|---|---|
| **Reproductive toxicity** | This product is not expected to cause reproductive or developmental effects. |
| **Specific target organ toxicity - single exposure** | May cause drowsiness and dizziness. |
| **Specific target organ toxicity - repeated exposure** | Not classified. |
| **Aspiration hazard** | May be an aspiration hazard. |

**Chronic effects** Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

## 12. Ecological information

**Ecotoxicity** Toxic to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

| Product | | Species | Test Results |
|---|---|---|---|
| Brakleen® Brake Parts Cleaner | | | |
| **Aquatic** | | | |
| Fish | LC50 | Fish | 19.1805 mg/l, 96 hours estimated |

| Components | | Species | Test Results |
|---|---|---|---|
| Tetrachloroethylene (CAS 127-18-4) | | | |
| **Aquatic** | | | |
| Fish | LC50 | Rainbow trout,donaldson trout (Oncorhynchus mykiss) | 4.73 - 5.27 mg/l, 96 hours |

* Estimates for product may be based on additional component data not shown.

**Persistence and degradability** Not available.

**Bioaccumulative potential** Not available.

**Partition coefficient n-octanol / water (log Kow)**

| | |
|---|---|
| Tetrachloroethylene | 2.88 |

**Mobility in soil** No data available.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

**Disposal of waste from residues / unused products** This material and its container must be disposed of as hazardous waste. Consult authorities before disposal. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations.

**Hazardous waste code** D039: Waste Tetrachloroethylene
F001: Waste Halogenated Solvent - Spent Halogenated Solvent Used in Degreasing
F002: Waste Halogenated Solvent - Spent Halogenated Solvent

**US RCRA Hazardous Waste U List: Reference**

| | |
|---|---|
| Tetrachloroethylene (CAS 127-18-4) | U210 |

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14. Transport information

**DOT**

**UN number** UN1950
**UN proper shipping name** Aerosols, poison, Packing Group III, Limited Quantity
**Transport hazard class(es)**
**Class** 2.2
**Subsidiary risk** 6.1(PGIII)
**Label(s)** 2.2, 6.1
**Packing group** Not applicable.
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.
**Packaging exceptions** 306
**Packaging non bulk** None
**Packaging bulk** None

**IATA**

**UN number** UN1950
**UN proper shipping name** Aerosols, non-flammable, containing substances in Division 6.1, Packing Group III, Limited Quantity
**Transport hazard class(es)**
**Class** 2.2
**Subsidiary risk** 6.1
**Packing group** Not applicable.

| | |
|---|---|
| **Environmental hazards** | No. |
| **ERG Code** | 2P |
| **Special precautions for user** | Read safety instructions, SDS and emergency procedures before handling. |
| **Other information** | |
| **Passenger and cargo aircraft** | Allowed with restrictions. |
| **Cargo aircraft only** | Allowed with restrictions. |

**IMDG**

| | |
|---|---|
| **UN number** | UN1950 |
| **UN proper shipping name** | AEROSOLS |
| **Transport hazard class(es)** | |
| **Class** | 2 |
| **Subsidiary risk** | 6.1 |
| **Packaing group** | Not applicable. |
| **Environmental hazards** | No. |
| **EmS** | Not available. |
| **Special precautions for user** | Read safety instructions, SDS and emergency procedures before handling. |

## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**SARA 304 Emergency release notification**

Not regulated.

**US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance**

| | |
|---|---|
| Tetrachloroethylene (CAS 127-18-4) | LISTED |

**CERCLA Hazardous Substance List (40 CFR 302.4)**

| | |
|---|---|
| Tetrachloroethylene (CAS 127-18-4) | Listed. |

**CERCLA Hazardous Substances: Reportable quantity**

| | |
|---|---|
| Tetrachloroethylene (CAS 127-18-4) | 100 LBS |

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Tetrachloroethylene (CAS 127-18-4)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

| | |
|---|---|
| **Safe Drinking Water Act (SDWA)** | Not regulated. |
| **Food and Drug Administration (FDA)** | Not regulated. |

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

| | |
|---|---|
| **Section 311/312 Hazard categories** | Immediate Hazard - Yes<br>Delayed Hazard - Yes<br>Fire Hazard - No<br>Pressure Hazard - Yes<br>Reactivity Hazard - No |
| **SARA 302 Extremely hazardous substance** | No |

**US state regulations**

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Tetrachloroethylene (CAS 127-18-4)

**US. New Jersey Worker and Community Right-to-Know Act**

Carbon dioxide (CAS 124-38-9)

**US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**

Not listed.

**US. Massachusetts RTK - Substance List**

Carbon dioxide (CAS 124-38-9)
Tetrachloroethylene (CAS 127-18-4)

**US. New Jersey Worker and Community Right-to-Know Act**

Tetrachloroethylene (CAS 127-18-4)

**US. Pennsylvania Worker and Community Right-to-Know Law**

Tetrachloroethylene (CAS 127-18-4)

**US. Rhode Island RTK**

Tetrachloroethylene (CAS 127-18-4)

**US. Pennsylvania Worker and Community Right-to-Know Law**

Carbon dioxide (CAS 124-38-9)

**US. California Proposition 65**

WARNING: This product contains a chemical known to the State of California to cause cancer.

**US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**

Tetrachloroethylene (CAS 127-18-4) Listed: April 1, 1988

**Volatile organic compounds (VOC) regulations**

**EPA**

| | |
|---|---|
| **VOC content (40 CFR 51.100(s))** | 0 % |
| **Consumer products (40 CFR 59, Subpt. C)** | Not regulated |

**State**

| | |
|---|---|
| **Consumer products** | This product is regulated as a Brake Cleaner. This product is not compliant to be sold for use in California and New Jersey. This product is compliant in all other states. |
| **VOC content (CA)** | 0 % |
| **VOC content (OTC)** | 0 % |

**International Inventories**

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|---|---|---|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | Yes |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

| | |
|---|---|
| **Issue date** | 12-20-2013 |
| **Revision date** | 10-29-2015 |
| **Prepared by** | Allison Cho |
| **Version #** | 03 |
| **Further information** | CRC # 491G |

| | |
|---|---|
| **HMIS® ratings** | Health: 2*<br>Flammability: 0<br>Physical hazard: 0<br>Personal protection: B |
| **NFPA ratings** | Health: 2<br>Flammability: 0<br>Instability: 0 |
| **NFPA ratings** |  |
| **Disclaimer** | The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries. |

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Tel. : (450) 645-0296
Fax : (450) 645-0444

# MATERIAL SAFETY DATA SHEET

**EMERGENCY: CANUTEC (613) 996-6666**

# MSDS :562 -2

## PRODUCT IDENTIFICATION AND USE

**NAME OF PRODUCT : Vision X** - 35ºC
**USE OF PRODUCT :** Windshield washer fluid

## TRANSPORTATION OF DANGEROUS GOODS

TDG
**SHIPPING NAME :** Alcohols, flammable, toxic N.O.S. (methanol/water solution) (> 450L only)
**WHMIS CLASSIFICATION**: B2, D1B, D2A,D2B
**P.N.I. :** UN 1986 **PRIMARY CLASS :** 3
**PACKING GROUP :** III **SUBSIDIARY CLASS :** 6.1
**U.S. DOT HAZARD CLASSIFICATION** ( For Ground Shipments Only)
HAZARD CLASS/PACKING GROUP: **ORM-D**
Alcohols, flammable, toxic N.O.S. (methanol/water solution), 3,(6.1)UN1986, PGIII
Quantities limit passenger : 60L, Quantities limit cargo aircraft : 220L, Vessel slow req locations : A,
Spesial Provision: B1,IB3,T7,TP1,TP28
**DOT MARINE POLLUTANTS:** This product does not contain Marine Pollutants as defined in 49 CFR 171.8.
**IMDG CODE SHIPPING CLASSIFICATION:**
Only containers not over 5L can be shipped as Limited Quantities
Shipping Name: Alcohols, flammable, toxic N.O.S. (methanol/water solution), 3,(6.1)UN1986, PGIII, FP38C,
IBC instructions : IBC 03, Pack instructions non bulk: P001, Slow&Seg: Category A, Outer package cannot weigh more then 30 kg, Spesial Provision:223,274,944
**IATA REGULATIONS:**
Shipping Name: Alcohols, flammable, toxic N.O.S. (methanol/water solution), 3, UN1986, PGIII
UN 1986, Class: 3,(6.1) PG: III, Hazard Label: Flammable Liquid&Toxic, Passenger quantities: 60L, Cargo bulk qty: 220L, Air craft Lim. Qty.: 2L, Ltd.Qty. Packaging instruction:Y309 , ERG code:3HP, Spesial Provision:A3

## COMPONENTS

| COMPOSITION | % B/W | CASE # | $LD_{50}$mg/kg Oral/rat | $LC_{50}$ ppm 4h | TLV ppm 8h |
|---|---|---|---|---|---|
| Methanol | 40-48 | 67-56-1 | 6200 to 13 000 | 64 000 | 200 |
| Performance additives | | | | | |

## PHYSICAL CARACTERISTICS

| | | | |
|---|---|---|---|
| **PHYSICAL STATE :** Liquid | **APPEARANCE :** Blue | **ODOR :** Alcohol | **ODORTRESHOLD :** Not available |
| **VAPOR TENSION :** | **VAPOR DENSITY :** | **EVAPORATING RATE :** | |

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# MATERIAL SAFETY DATA SHEET

**EMERGENCY: CANUTEC (613) 996-6666**

| | | |
|---|---|---|
| Not available | Not available | Not available |
| **BOILING RANGE :** 79°C | **FREEZING POINT :** -35°C | **pH :** N/A |
| **DENSITY (20°C) :** 0,939 | **DISTRIBUTION FACTOR WATER/OIL :** Not available | **SOLUBILITY IN WATER (25°C) :** 100% |

## REACTIVITY DATA

**CHEMICAL STABILITY :** Stable
**INCOMPATIBILITY WITH OTHER PRODUCTS :** Avoid contact with oxidizing agents, strong bases and strong acids. Avoid using in presence of natural rubber. May corrode lead and aluminum.
**REACTIVITY CONDITIONS :** Avoid excessive heat, flames and other ignition sources. No hazardous polymerization.

## EXPLOSION AND FIRE RISKS

**FLAMMABILITY :** Flammable
**EXTINGUISHING METHODS :** Water, dry chemical powder purple K, FAM resistant to alcohol with 6% foam or carbon dioxide.
**FLASH POINT :** 30°C close cup **AUTO-IGNITION TEMPS. :** 385ºC
**FLAMMABILITY (% per volume)**
**SUPERIOR LIMIT :** Not available **LOWER LIMIT :** 3,2
**HAZARDOUS COMBUSTION PRODUCT :** Vapors forms a flammable/explosive mixture with air between upper and lower flammable limits. Combustion may produce carbon dioxide, carbon monoxide and formaldehyde.
**EXPLOSIBILITY DATA :**

## TOXICOLOGICAL PROPERTIES

| **ABSORPTION WAYS** | | | **CONTACT** | |
|---|---|---|---|---|
| **SKIN** √ | **INHALATION** √ | **INGESTION** √ | **WITH SKIN** √ | **EYES** √ |

**EFFECTS OF EXPOSURE TO PRODUCT :** Swallowing even small amount of methanol can cause blindness and death other effects may be nausea, headache, abdominal pain, vomiting and visual disturbances ranging from blurred vision to light sensitivity. Inhalation of high airborne concentration can also irritate mucous membranes, cause sleepiness, confusion, loss of consciousness, digestive and visual disturbances and death. May by absorbed trough the skin in toxic or letal amounts. Causes mild irritation, redness, cracking and drying. Repeated exposure by inhalation or absorption may cause systemic poisoning, brain disorders, impaired vision and blindness. Inhalation may worsen conditions such as emphysema or bronchitis.

## PREVENTIVE MEASURES

**PROTECTIVE EQUIPMENT :** Gloves, security glasses and protective apron.
**GLOVES :** Butyl and nitrite.

**RESPIRATORY SYSTEM :** Necessary over the permitted limit.
**OCULAR INSTRUMENT :** Security glasses and face shield. **CLOTHING :** Apron, jacket
**TECHNICAL CONTROL :** Ventilation
**PROCEDURE IN CASE OF LEAKS/SPILLS :** Extremely flammable liquid. Eliminate all ignition sources, stop spill and use absorbent materials. Collect liquid with explosion proof pumps. For small spills, collect with a non-combustible absorbent. Recover methanol or dilute with water to reduce fire hazard. Do not throw in the sewers or garbage.
**HANDLING :** Avoid breathing vapor. Do not get in eyes, skin or on clothing. Wash thoroughly with soap and water after handling.
**WASTE DISPOSAL :** Incineration, biological treatment of dilute solution, or landfill of solidified prior to disposal in accordance with local, federal and provincial regulations.
**STORAGE :** In a cool, dry and well ventilated area. Keep away from incompatible material and from sources of ignition (naked flames, sparks, electricity). Keep the containers grounded especially during pumping and transfer operations.

## FIRST AID

**EYES :**Remove contact lenses if present and easy to do so. In case of contact, immediately flush eyes with plenty of clean running water for at least 15 minutes,lifting the upper and lower eyelids occasionally.Obtain medical attention.
**SKIN :** If in skin or hair, remove immediately all contaminated clothing. Rinse skin with water/shower. In case of contact, remove contaminated clothing. In a shower, wash affected areas with soap and water for at least 15 minutes. Seek medical attention if irritation occurs or persists. Wash contaminated clothing before reuse. Prolonged contact with methanol may defat skin tissue, resulting in drying and cracking.
**INGESTION :** If swallowed immediately call a POISON CENTRE or doctor. Rinse mouth. Swallowing methanol is potentially life threatening. Onset of symptoms may be delayed for 18 to 24 hours after digestion. If conscious and medical aid is not immediately available, do not induce vomiting. In actual or suspected cases of ingestion, transport to medical facility immediately. (See note to physician)
**INHALATION :** If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTRE or doctor. Specific treatment is urgent (see note to physician).
**NOTES TO THE ATTENTION OF THE DOCTOR :** Acute exposure to methanol, either through ingestion or breathing high airborne concentrations can result in symptoms appearing between 40 minutes and 72 hours after exposure. Symptoms and signs are usually limited to the Central Nervous System (CNS), eyes and gastrointestinal tract. Because of the initial CNS's effects of headache, vertigo, lethargy and confusion, there may be an impression of ethanol intoxication. Blurred vision, decreased acuity and photophobia are common complaints. Treatment with ipecac or lavage is indicated in any patient presenting within two hours of ingestion. A profound metabolic acidosis occurs in severe poisoning and serum bicarbonate levels are a more accurate measure of severity than serum methanol levels. Treatment protocols are available from most major hospitals and early collaboration with appropriate hospitals is recommended. Ethanol significantly decreases the toxicity of methanol because it competes for the same metabolic enzymes, and has been used to treat methanol poisoning.

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# MATERIAL SAFETY DATA SHEET

**EMERGENCY: CANUTEC (613) 996-6666**

## INFORMATION ON THE M.S.D.S. PREPARATION

**PREPARED BY :** **TELEPHONE : (450) 645-0296** **REVISED January 2012**
**Hall Chem Mfg. Inc.**
**NOTE :**
The information in this detailed M.S.D.S. is available on request, for the customer service. It must not be used for any other purpose and its reproduction and/or publication is forbidden without the consent of HALL CHEM MFG. INC. Even though this information is based on reliable sources, HALL CHEM MFG. INC. cannot guarantee its accuracy and formally excludes all explicit guarantee relative to the exactitude of this information or of the results following its application.

# Material Safety Data Sheet

According to the Controlled Product Regulations

## 1. MATERIAL AND COMPANY IDENTIFICATION

| | | |
|---|---|---|
| **Material Name** | : | **MotoMaster ATF Dexron III / Mercon** |
| **Uses** | : | Transmission fluid |
| **Product Code** | : | 001B1831 |
| **Manufacturer/Supplier** | : | **Shell Canada Products**<br>400 - 4th Avenue S.W<br>Calgary AB T2P 0J4<br>Canada |
| **Telephone** | : | (+1) 8006611600 |
| **Fax** | : | (+1) 4033848345 |
| **Emergency Telephone Number** | : | CHEMTREC (24 hr): (+1) 800-424-9300<br>CANUTEC (24 hr): (+1) 613-996-6666 |

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

**Mixture Description:** : Highly refined mineral oils and additives.

**The highly refined mineral oil contains <3% (w/w) DMSO-extract, according to IP346.**

**Refer to Chapter 8 for Occupational Exposure Guidelines.**

## 3. HAZARDS IDENTIFICATION

| | | |
|---|---|---|
| **WHMIS Class/Description** | : | THIS PRODUCT IS NOT A WHMIS CONTROLLED SUBSTANCE. |
| **Routes of Exposure** | : | Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion. |
| **Health Hazards** | : | Not expected to be a health hazard when used under normal conditions. Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis. Used oil may contain harmful impurities. |
| **Signs and Symptoms** | : | Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Ingestion may result in nausea, vomiting and/or diarrhoea. |
| **Safety Hazards** | : | Not classified as flammable but will burn. |
| **Environmental Hazards** | : | Not classified as dangerous for the environment. |

## 4. FIRST AID MEASURES

| | | |
|---|---|---|
| **General Information** | : | Not expected to be a health hazard when used under normal conditions. |

| | | |
|---|---|---|
| **Inhalation** | : | No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice. |
| **Skin Contact** | : | Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention. |
| **Eye Contact** | : | Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention. |
| **Ingestion** | : | In general no treatment is necessary unless large quantities are swallowed, however, get medical advice. |
| **Advice to Physician** | : | Treat symptomatically. |

## 5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

| | | |
|---|---|---|
| **Flash point** | : | Typical 180 °C / 356 °F (COC) |
| **Upper / lower Flammability or Explosion limits** | : | Typical 1 - 10 %(V)(based on mineral oil) |
| **Auto ignition temperature** | : | > 320 °C / 608 °F |
| **Hazardous Combustion Products and Specific Hazards** | : | Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds. |
| **Suitable Extinguishing Media** | : | Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only. |
| **Unsuitable Extinguishing Media** | : | Do not use water in a jet. |
| **Protective Equipment for Firefighters** | : | Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space. |

## 6. ACCIDENTAL RELEASE MEASURES

| | | |
|---|---|---|
| **Protective Measures** | : | Avoid contact with skin and eyes. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. |
| **Clean Up Methods** | : | Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly. |
| **Additional Advice** | : | Local authorities should be advised if significant spillages cannot be contained. |

## 7. HANDLING AND STORAGE

| | | |
|---|---|---|
| **General Precautions** | : | Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Use the information in this data sheet as input to a risk |

assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

**Handling** : Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used.

**Storage** : Keep container tightly closed and in a cool, well-ventilated place. Use properly labelled and closeable containers. Store at ambient temperature.

**Recommended Materials** : For containers or container linings, use mild steel or high density polyethylene.

**Unsuitable Materials** : PVC.

**Additional Information** : Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

If the American Conference of Governmental Industrial Hygienists (ACGIH) value is provided on this document, it is provided for information only.

**Occupational Exposure Limits**

| Material | Source | Type | ppm | mg/m3 | Notation |
|---|---|---|---|---|---|
| Oil mist, mineral | ACGIH | TWA(Inhalable fraction.) | | 5 mg/m3 | |

Consult local authorities for acceptable exposure limits within their jurisdiction.

**Exposure Controls** : The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control airborne concentrations. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

**Personal Protective Equipment** : Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

**Respiratory Protection** : No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate

| | | |
|---|---|---|
| | | combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapours [boiling point >65°C(149 °F)]. |
| **Hand Protection** | : | Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended. |
| **Eye Protection** | : | Wear safety glasses or full face shield if splashes are likely to occur. |
| **Protective Clothing** | : | Skin protection not ordinarily required beyond standard issue work clothes. |
| **Monitoring Methods** | : | Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. |
| **Environmental Exposure Controls** | : | Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation. |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|---|---|---|
| Appearance | : | Red. Liquid at room temperature. |
| Odour | : | Slight hydrocarbon. |
| Odour threshold | : | Data not available |
| pH | : | Not applicable. |
| Initial Boiling Point and Boiling Range | : | > 280 °C / 536 °F estimated value(s) |
| Pour point | : | Typical -45 °C / -49 °F |
| Vapour pressure | : | < 0.5 Pa at 20 °C / 68 °F (estimated value(s)) |
| Specific gravity | : | Typical 0.871 |
| Density | : | Typical 871 kg/m3 |
| Water solubility | : | Negligible. |
| n-octanol/water partition coefficient (log Pow) | : | > 6 (based on information on similar products) |
| Kinematic viscosity | : | > 40 mm2/s at 40 °C / 104 °F |
| Vapour density (air=1) | : | > 1 (estimated value(s)) |
| Evaporation rate (nBuAc=1) | : | Data not available |

## 10. STABILITY AND REACTIVITY

| | | |
|---|---|---|
| **Stability** | : | Stable. |

| | | |
|---|---|---|
| **Conditions to Avoid** | : | Extremes of temperature and direct sunlight. |
| **Materials to Avoid** | : | Strong oxidising agents. |
| **Hazardous Decomposition Products** | : | Hazardous decomposition products are not expected to form during normal storage. |
| **Hazardous Polymerisation** | : | No |
| **Sensitivity to Mechanical Impact** | : | No |
| **Sensitivity to Static Discharge** | : | No |

## 11. TOXICOLOGICAL INFORMATION

| | | |
|---|---|---|
| **Basis for Assessment** | : | Information given is based on data on the components and the toxicology of similar products. |
| **Routes of Exposure** | : | Skin and eye contact are the primary routes of exposure although exposure may occur following accidental ingestion. |
| **Acute Oral Toxicity** | : | Expected to be of low toxicity: LD50 > 5000 mg/kg , Rat. |
| **Acute Dermal Toxicity** | : | Expected to be of low toxicity: LD50 > 5000 mg/kg , Rabbit. |
| **Acute Inhalation Toxicity** | : | Not considered to be an inhalation hazard under normal conditions of use. |
| **Skin Irritation** | : | Expected to be slightly irritating. Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis. |
| **Eye Irritation** | : | Expected to be slightly irritating. |
| **Respiratory Irritation** | : | Inhalation of vapours or mists may cause irritation. |
| **Sensitisation** | : | Not expected to be a skin sensitiser. |
| **Repeated Dose Toxicity** | : | Not expected to be a hazard. |
| **Mutagenicity** | : | Not considered a mutagenic hazard. |
| **Carcinogenicity** | : | Product contains mineral oils of types shown to be non-carcinogenic in animal skin-painting studies. Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC). Other components are not known to be associated with carcinogenic effects. |
| **Reproductive and Developmental Toxicity** | : | Not expected to be a hazard. |
| **Additional Information** | : | Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the environment on disposal.<br>ALL used oil should be handled with caution and skin contact avoided as far as possible. |

## 12. ECOLOGICAL INFORMATION

Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products.

| | | |
|---|---|---|
| **Acute Toxicity** | : | Poorly soluble mixture.May cause physical fouling of aquatic organisms.Expected to be practically non toxic:LL/EL/IL50 > |

100 mg/l(to aquatic organisms)(LL/EL50 expressed as the nominal amount of product required to prepare aqueous test extract).Mineral oil is not expected to cause any chronic effects to aquatic organisms at concentrations less than 1 mg/l.

**Mobility** : Liquid under most environmental conditions. Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.

**Persistence/degradability** : Expected to be not readily biodegradable. Major constituents are expected to be inherently biodegradable, but the product contains components that may persist in the environment.

**Bioaccumulation** : Contains components with the potential to bioaccumulate.

**Other Adverse Effects** : Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

## 13. DISPOSAL CONSIDERATIONS

**Material Disposal** : Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses.

**Container Disposal** : Dispose in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.

**Local Legislation** : Disposal should be in accordance with applicable regional, national, and local laws and regulations.

## 14. TRANSPORT INFORMATION

**Canadian Road and Rail Shipping Classification**

This product is not regulated under the Canadian Transportation of Dangerous Goods Regulations for transport by road and rail.

## 15. REGULATORY INFORMATION

**The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.**
**This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.**

**WHMIS Class/Description** : THIS PRODUCT IS NOT A WHMIS CONTROLLED SUBSTANCE.

## Material Safety Data Sheet

**Inventory Status**

| | | |
|---|---|---|
| EINECS | : | All components listed or polymer exempt. |
| TSCA | : | All components listed. |
| DSL | : | All components listed. |

## 16. OTHER INFORMATION

| | | |
|---|---|---|
| **MSDS Version Number** | : | 1.1 |
| **MSDS Effective Date** | : | 2014-12-18 |
| **MSDS Revisions** | : | A vertical bar (\|) in the left margin indicates an amendment from the previous version. |
| **MSDS Regulation** | : | The content and format of this (M)SDS is in accordance with the Controlled Product Regulations. |
| **MSDS Prepared By** | : | Shell Product Stewardship; 1-800-661-1600 |
| **MSDS Distribution** | : | The information in this document should be made available to all who may handle the product. |
| **Disclaimer** | : | The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty or guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product. |

**POWER SERVICE PRODUCTS, INC.**

# MATERIAL SAFETY DATA SHEET

## SECTION 1 - CHEMICAL COMPANY AND PRODUCT IDENTIFICATION

**PRODUCT NAME:** DIESEL 9•1•1

Unless otherwise noted, all sections of this MSDS apply to each of the following products and part numbers.

**PART NUMBERS**:

8016-09, 8025-12, 8041-04, 8080-06, 8050-02, 8055-01, 18016-09, 18025-12, 18040-04, 18080-06

**COMPANY IDENTIFICATION:**

Power Service Products, Inc.
P.O. Box 1089
Weatherford, TX 76086
Email: psp@powerservice.com
Phone: 800/643-9089 or 817-599-9486
Fax: 817-599-4893

**Emergency Phone Number:** Within USA 1-800-424-9300. Outside USA 001-703-527-3887 (Call Collect).

## SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Specific chemical information is being withheld as a Trade Secret. Specific chemical information will be made available to health professionals in accordance with 29 CFR 1910.1200.

**INGREDIENTS**

$C_3$-$C_5$ Mixed Hydroxy-Containing Aliphatic Hydrocarbons
Petroleum Distillates
Aromatic Hydrocarbons

## SECTION 3 - HAZARDS IDENTIFICATION

### POTENTIAL HEALTH EFFECTS:

**EYES:** May cause eye irritation. Effects may include discomfort or pain and redness.

**SKIN:** May be harmful if absorbed through the skin. May cause skin irritation. Prolonged or repeated skin contact may cause drying or defatting of the skin. Symptoms may include pain, itching, discoloration, swelling, and blistering.

**INHALATION:** Do not breathe vapors. Harmful or fatal if inhaled. Breathing of high vapor concentrations may cause dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness. The vapor or fumes from this material may cause respiratory irritation and damage auditory system. Breathing this material at elevated concentrations causes central nervous system effects. Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors, or convulsions, loss of consciousness, coma or death.

**INGESTION:** Do not take internally. Harmful or fatal if swallowed. If swallowed, may be aspirated and cause lung damage. This material can directly enter the lungs, if swallowed, or if subsequently vomited. Once in the lungs it is very difficult to remove and can cause severe injury or death.

### TARGET ORGANS:

Central nervous system, auditory system, respiratory system, blood, eyes, heart, kidneys, liver, skin, gastrointestinal tract, mucous membranes.

## SECTION 4 - FIRST AID MEASURES

As a precaution, exposure to liquids, vapors, mists and fumes should be minimized.

### EYE CONTACT:

Hold eyelids apart and flush eyes with large amounts of water for at least 15 minutes. Remove contact lenses, if present, after first 5 minutes of rinsing. If irritation persists, call a physician.

### SKIN CONTACT:

Wash contact area with soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse. If irritation persists, call a physician.

### INHALATION:

If overcome by vapors, move the exposed person to fresh air. If breathing is labored, administer oxygen. If breathing has stopped, apply artificial respiration. Seek medical attention if breathing difficulties continue.

**INGESTION:**
If swallowed, do NOT induce vomiting. If vomiting occurs, have person lean forward. Keep at rest. Give the person a glass of water or milk to drink and get immediate medical attention. Never give anything by mouth to an unconscious person.

## SECTION 5 - FIRE AND EXPLOSION HAZARD DATA

**FLAMMABLE PROPERTIES:**

**FLASH POINT:** 75°F (TCC) 24°C

**FLAMMABLE LIMITS:** lower**:** Not Determined upper**:** Not Determined

**AUTOIGNITION TEMPERATURE:** Not Determined

**EXTINGUISHING MEDIA:**
Use water fog, alcohol-resistant foam, dry chemical or carbon dioxide ($CO_2$) to extinguish flames.

**FIRE FIGHTING:**

**FIRE FIGHTING INSTRUCTIONS**: Use standard protective equipment including self-contained breathing apparatus (SCBA).

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Vapors are heavier than air and may travel along the ground to a distant ignition source and flash back. See Section 10 for Stability and Reactivity.

**NOTE:** EMPTY CONTAINERS CONTAIN COMBUSTIBLE VAPORS. DO NOT USE CUTTING TORCH EQUIPMENT OR ANY OTHER FLAME OR OTHER SOURCES OF IGNITION ON ANY EMPTY CONTAINER.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

**PROTECTIVE MEASURES**:
Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas. Eliminate all sources of ignition in the vicinity of the spill or released vapor. See Section 3 for Hazards Identification. See Section 4 for First Aid Measures. See Section 5 for Fire Fighting Information. See Section 8 for Personal Protective Equipment.

**SPILL MANAGEMENT:**
Eliminate potential sources of ignition. Stop leak if it can be done without risk. Dike and contain spill. Do not touch or walk through spilled material. Prevent entry into waterways, sewer, basements or confined areas. Remove with vacuum trucks or pump to storage/salvage vessels.

Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly. A vapor suppressing foam may be used to reduce vapors. Local, state and federal laws and/or regulations may apply to releases and disposal of this material, as well as those materials and items employed in the clean-up releases. The user/responder will need to determine which local, state and federal laws and/or regulations are applicable. The National Response Center can be reached at 1-800-424-8802.

## SECTION 7 - HANDLING AND STORAGE

**HANDLING**: Avoid contact with eyes and skin. Use only with adequate ventilation. Use proper bonding and/or grounding procedures. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). Keep away from ignition sources such as heat, sparks, and flames. No smoking.

**STORING:** DO NOT USE OR STORE near heat, sparks, or flame. USE AND STORE ONLY IN A WELL-VENTILATED AREA. Handle containers with care. Keep container closed when not in use.

**STORAGE TEMPERATURE:** -40°F to 100°F (-40°C to 38°C)

**NOTE:** CONTAINERS ARE STRICTLY SINGLE TRIP CONTAINERS. THEY ARE NOT TO BE USED FOR ANY REASON AFTER BEING EMPTIED. EMPTY CONTAINERS CONTAIN COMBUSTIBLE VAPORS. DO NOT USE CUTTING TORCH EQUIPMENT OR ANY OTHER FLAME OR OTHER SOURCES OF IGNITION ON ANY EMPTY CONTAINER.

## SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

### EXPOSURE GUIDELINES:

| | | OSHA | ACGIH | | NIOSH | | | |
|---|---|---|---|---|---|---|---|---|
| | CAS # | PEL | TLV | STEL | REL | STEL | IDLH | Note |
| Ethylbenzene | 100-41-4 | 100 ppm | 100 ppm | 125 ppm | 100 ppm | 125 ppm | 800 ppm | n/a |
| Naphthalene | 91-20-3 | 10 ppm | 10 ppm | 15 ppm | 10 ppm | 15 ppm | 250 ppm | skin |
| Xylene | 1330-20-7 | 100 ppm | 100 ppm | 150 ppm | 100 ppm | 150 ppm | 900 ppm | n/a |
| 1,2,4-Trimethylbenzene | 95-63-6 | not est. | 25 ppm | not est. | 25 ppm | not est. | not est. | n/a |
| Petroleum Distillates | n/a | 500 ppm | not est. | not est. | 86 ppm | 444 ppm | 1,100 ppm | n/a |
| 2-Butanol | 78-92-2 | 150 ppm | 100 ppm | not est. | 100 ppm | 150 ppm | 2,000 ppm | n/a |
| N-Butanol | 71-36-3 | 100 ppm | 20 ppm | not est. | 50 ppm | not est. | 1,400 ppm | skin |

**ENGINEERING CONTROLS:** The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Local exhaust ventilation is recommended to control exposure.

**PERSONAL PROTECTIVE EQUIPMENT (PPE):**

**Eyes and Face:** Eye protection such as safety glasses or chemical goggles is recommended if contact is likely.

**Skin:** If prolonged or repeated skin contact is likely, chemical/oil resistant clothing and gloves are recommended. Wear additional protective clothing as appropriate.

**Respiratory:** Wear a NIOSH/MSHA approved respirator as necessary.

**Specific Hygiene Measures:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Practice good housekeeping.

**NOTE:** These precautions are for room temperature handling.

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL FORM**: Liquid
**COLOR**: Straw Yellow
**ODOR**: Strong Solvent
**POUR POINT**: -65°F (-54°C)
**BOILING POINT**: 200°F (93°C) est.
**VAPOR PRESURE (psi)**: .58 est.
**VAPOR DENSITY (AIR = 1)**: >3.0 est.
**pH**: 7-8 slightly basic
**SPECIFIC GRAVITY (at 60°F)**: 0.84

## SECTION 10 - STABILITY AND REACTIVITY

**CHEMICAL STABILITY:**
This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**CONDITIONS TO AVOID:**
Flames, high energy ignition sources, and elevated temperatures.

**MATERIALS TO AVOID:**

May react with oxygen, strong acids, including mineral acids, strong oxidizing agents, such as; chlorates, nitrates, peroxides, alkalis, etc., nitriles, chromic anhydride, alkali metals, halogens, chlorine, ethylene oxide, acetaldehyde, and isocyanates.

**HAZARDOUS DECOMPOSITION:**
Carbon oxides, products of incomplete combustion.

**HAZARDOUS POLYMERIZATION**:
Hazardous polymerization will not occur.

## SECTION 11 - TOXICOLOGICAL INFORMATION

**IMMEDIATE HEALTH EFFECTS:**

**This product contains the following chemicals classified as carcinogens as indicated:**

| Chemical | Listed By | Part Numbers |
|---|---|---|
| Ethylbenzene | IARC | ALL |
| Napthalene | IARC, NTP | ALL |

## SECTION 12 - ECOLOGICAL INFORMATION

**ECOTOXICITY:**
This material is expected to be toxic to aquatic organisms.

## SECTION 13 - DISPOSAL CONSIDERATIONS

**RCRA Information:** Disposal of unused product may be subject to RCRA hazardous waste regulations (40 CFR Part 261). Disposal of the used product may also be regulated as hazardous waste due to resulting mixture characteristics, mixture components or product use. Such changes to the product may result in different and/or additional hazardous waste codes. Potential RCRA waste code based on the product as shipped: D001 IGNITABILITY. State or local laws may impose additional regulatory requirements regarding disposal. *Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.*

**EMPTY CONTAINER WARNING:** Empty containers may contain residue and can be dangerous. See Section 5 for Fire and Explosion Hazard Data.

## SECTION 14 - TRANSPORTATION INFORMATION

**The following part numbers are Consumer Commodities and are not regulated by DOT:**

8016-09, 8025-12, 8041-04, 8080-06, 18016-09, 18025-12, 18041-04, 18080-06

**The following part numbers are regulated by DOT:**

8050-02, 8055-01

**PROPER SHIPPING NAME:** Flammable Liquid, N.O.S., (Hydroxy Compounds, Hydrocarbons)
**HAZARD CLASS**: 3
**I.D. NUMBER**: UN 1993
**PACKING GROUP**: III
**PLACARDING**: Flammable Liquid

## SECTION 15 - REGULATORY INFORMATION

### §14(a) Consumer Product Safety Act General Certificate of Conformity

Power Service Products, Inc. certifies that this product meets the statutory and regulatory requirements of the US Consumer Products Safety Act, the Federal Hazardous Substances Act, and the Poison Prevention Packaging Act of 1970, as applicable. The Power Service products are manufactured in the United States in Weatherford, Texas, unless otherwise indicated on the product label. The product manufacture date is stamped on the product container. This Certification is based upon a reasonable testing program conducted by Power Service Products, Inc. which includes a quality control program incorporating, as necessary, confirmation of compliance by component suppliers. Third-party testing is not required to certify compliance. Further details may be obtained by contacting the Power Service Products, Inc. Compliance Coordinator at 1-800-643-9089.

Contents of this MSDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200

**TSCA STATUS:**
All chemical substances found in this product comply with the Toxic Substances Control Act inventory reporting requirements.

**EPA SARA TITLE III CHEMICAL LISTINGS:**

**Section 302 Extremely Hazardous Substances:** None

**Sections 311/ 312 Hazard Class**:
Acute Health Effects: Yes Sudden Release of Pressure Hazard: No

Chronic Health Effects: Yes Reactivity Hazard: No
Fire Hazard: Yes

**NFPA (NATIONAL FIRE PROTECTION ASSOCIATION) RATING:**
HEALTH: **2**
FIRE: **3**
REACTIVITY: **0**

**Section 313:**
This product contains the following chemicals that are subject to the reporting requirements of EPCRA Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (40 CFR Part 372).

| CAS Number | Chemical Name | Max % |
|---|---|---|
| 100-41-4 | Ethylbenzene | 3.0 |
| 1330-20-7 | Xylene, Mixed Isomers | 2.0 |
| 91-20-3 | Naphthalene | 0.5 |
| 95-63-6 | 1,2,4 Trimethylbenzene | 9.0 |
| 78-92-2 | 2-Butanol | 20.0 |
| 71-36-3 | N-Butanol | 10.0 |

**The following components of this material are found on these state regulatory lists.**

**1, 2, 4 Trimethylbenzene:** IL RTK, MN Hazardous substance, NJ RTK, PA RTK, RI RTK

**Ethylbenzene:** NDEP HAP, California Prop. 65, MA RTK, NJ RTK, PA RTK, RI RTK, MN Hazardous substance

**Xylene:** NDEP HAP, MA RTK, NJ RTK, PA RTK, RI RTK, MN Hazardous substance

**Napthalene:** California Prop. 65, MA RTK, NJ RTK, PA RTK, MN Hazardous substance

**2-Butanol:** PA RTK, MA RTK, NJ RTK

**N-Butanol:** RI RTK, PA RTK, MN Hazardous substance, MA RTK, NJ RTK

**This product contains a chemical known to the state of California to cause cancer.**

## SECTION 16 – OTHER INFORMATION

The information contained herein is offered in good faith and is believed to be accurate based on the data available to us as of the date of MSDS preparation. The information in this document applies to this specific product as supplied. It may not be appropriate for this product if the product is used in combination with other materials. The information in this document is not intended to constitute product performance information. Some of the information presented

and conclusions drawn herein are from sources other than direct test data on the product. No statement shall be construed as an endorsement of any product or process. The recommended industrial hygiene and safe handling procedures are believed to be valid in the context of the intended use as described in product labeling. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate. You are urged to obtain material safety data sheets for all products you buy, process, use or distribute, and are encouraged to advise those who may come in contact with such products of the information contained therein. Regulatory requirements are subject to change and may differ between locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. No warranty or guarantee is expressed or implied with respect to this product, the accuracy and sufficiency of the data or recommendations herein, or the results to be obtained from the use of this product. IN NO EVENT SHALL POWER SERVICE PRODUCTS, INC. BE LIABLE FOR ANY LOSS, CLAIM, DAMAGE OR LIABILITY OF ANY KIND, WHICH MAY ARISE FROM OR IN CONNECTION WITH THE INFORMATION CONTAINED IN THIS DOCUMENT OR FROM THE USE, HANDLING OR STORAGE OF THE PRODUCT BY THE BUYER/USER, WHETHER DIRECT, INDIRECT, OR CONSEQUENTIAL, OR FOR ANY CLAIM BY ANY THIRD PARTY, BEYOND THE PURCHASE PRICE OR REPLACEMENT OF THE PRODUCT IN CONNECTION WITH WHICH SUCH LOSS, CLAIM, DAMAGE OR LIABILITY AROSE.

THE FOREGOING LIMITATIONS APPLY REGARDLESS OF THE CAUSES OR CIRCUMSTANCES GIVING RISE TO SUCH LOSS, CLAIM, DAMAGE OR LIABILITY, EVEN IF SUCH LOSS, CLAIM, DAMAGE, OR LIABILITY IS BASED ON NEGLIGENCE OR OTHER TORTS OR BREACH OF CONTRACT.

**MATERIAL SAFETY DATA SHEET**

**PRODUCT INFORMATON**

| | |
|---|---|
| Product Name: | ECONOMICAL R.V. PLUMBING ANTIFREEZE -50 |
| General/Generic Name: | AQUEOUS MEDIA |
| Product Use: | ANTIFREEZE |
| TDG Hazard Classification: | ALCOHOL (ALCOHOL ETHYL) FLAMMABLE LIQUID<br>CLASS 3 UN 1987 PG III |
| WHMIS Classification: | CLASS B-2; FLAMMABLE LIQUID WITH A FLASH POINT LOWER THAN 37.8°c (100°F) |
| Vendor Name & Address: | HOOD CHEMICAL<br>295 ALLIANCE ROAD #14<br>MILTON ON L9T 4W8<br>TEL: 905-876-0707 |

HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS

| Ingredient: | **%W/W** | **TLV** | **CAS#** |
|---|---|---|---|
| Alcohol ethyl | 10-30 | ACGIH TLV (Canada, 2003)<br>TWA: 1000 ppb 8 hour (s) | 64-17-5 |

PHYSICAL DATA

| | |
|---|---|
| Physical State and appearance: | Liquid |
| Odour and color | Lemon like (Slight). Pink in color |
| Odour Threshold: | The lowest known value is 100 ppm (Alcohol ethyl) |
| Specific Gravity | 0.96 to 0.98 (Water = 1) |
| Vapor Pressure: | The highest known value is 5.7 kPa (43 mmHg) (at 20°C) (Alcohol ethyl). |
| Vapor Density: | The highest known value is 1.59 (Air=1) (Alcohol ethyl) |
| Evaporation Rate: | 2.4 (Alcohol ethyl) compared to Butyl acetate. |
| Boiling/Condensation Point: | The lowest known value is 78°C (172.4°F) Alcohol ethyl) |
| Water Solubility: | Easily soluble in cold water, hot water, methanol |
| pH (1% Soln/Water) | 7.5 to 8.5 (Conc. (1%w/w): 100) (Basic) |
| Melting/Freezing Point: | May start to solidify at -114_C (-172_F) based on data for: Alcohol ethyl |
| VOC Content: | 98 (%) |
| The Product is: | FLAMMABLE |
| Viscosity: | Dynamic: The highest known value is 1.17 to 1.21 cP (Alcohol ethyl) |
| Auto-Ignition | The lowest known value is 363°C (685.4°F) |
| Flammable Limits: | The greatest known range is LOWER: 3.3% UPPER: 19% (Alcohol ethyl) |
| Fire Hazards in Presence of Various Substances: | Slightly flammable to flammable in presence of open flames, sparks & static discharge. Non-flammable in presence of shocks, of heat. |

**REACTIVITY DATA**

| | |
|---|---|
| Stability: | The product is stable |
| Incompatibility: | Slightly reactive to reactive with OXIDIZING AGENTS |

## TOXICOLOGICAL PROPERTIES

| | |
|---|---|
| Routes of Entry: | ABSORBED THROUGH SKIN. EYE CONTACT. |
| Toxicity to Animals: | ACUTE ORAL TOXICITY (LD50): 353000 mg/kg (rat) (CALCULATED VALUE FOR THE MIXTURE) |
| Acute Effects on Humans: | |
| Eyes: (IRRITANT). | SLIGHT HAZARDOUS IN CASE OF EYE CONTACT |
| Skin: | SENSITIZATION OF THE PRODUCT: NOT AVAILABLE BY ITCHING, SCALING, REDDENING, OR, OCCASIONALLY BLISTERING. |
| Inhalation: | NON-IRRITANT FOR LUNGS |
| Ingestion: | SLIGHTLY HAZARDOUS IN CASE OF INGESTION |
| Chronic Effects on Humans | SLIGHTLY HAZARDOUS IN CASE OF SKIN CONTACT (IRRITANT) OF EYE CONTACT (IRRITANT) |
| Carcinogenic Effects: | CLASSIFIED A4 (NOT CLASSIFIABLE FOR HUMAN OR ANIMAL.) BY ACGIS (ALCOHOL ETHYL). |
| Mutugenic Effects: | NOT AVAILABLE |
| Teratogenic Effects: | NOT AVAILABLE |
| Developmental Toxicity: | NOT AVAILABLE |

## PREVENTATIVE MEASURES

Protective Equipment To Be Used:

| | |
|---|---|
| Respiratory Protection: | WEAR APPROPRIATE RESPIRATOR WHEN VENTILLATION IS INADEQUATE |
| Eyes: | SAFETY GLASSES. |
| Body: | NO SPECIAL PROTECTIVE CLOTHING IS REQUIRED. |
| Hands: | IMPERVIOUS GLOVES. |
| SMALL SPILL OR LEAK : | DILUTE WITH WATER AND MOP UP, OR ABSORB WITH AN INERT DRY MATERIAL AND PLACE IN AN APPROPRIATE WASTE DISPOSAL. |
| LARGE SPILL AND LEAK: | KEEP AWAY FROM HEAT. KEEP AWAY FROM SOURCES OF IGNITION. STOP LEAK IF WITHOU RISK. ABSORB WITH **DRY** EARTH, SAND OR OTHER NON-COMBUSTIBLE MATERIAL. DO NOT TOUCH SPILLED MATERIAL. PREVENT ENTRY INTO SEWERS, BASEMENTS OR CONFINED AREAS; DIKE IF NEEDED |

Handling and Storage Conditions:

KEEP AWAY FROM HEAT, SPARKS AND FLAME. KEEP CONTAINER CLOSED. USE ONLY WITH ADEQUATE VENTILATION. TO AVOID FIRE OR EXPLOSION, DISSIPATE STATIC ELECTRICITY DURING TRANSFER BY GROUNDING AND BONDING CONTAINERS AND EQUIPMENT BEFORE TRANSFERRING MATERIAL. USE EXPLOSION-PROOF ELECTRICAL (VENTILATING, LIGHTING AND MATERIAL HANDLING) EQUIPMENT.

STORE IN SEGREGATED AND APPROVED AREA. KEEP CONTAINER IN A COOL, WELL-VENTILATED AREA. KEEP CONTAINER TIGHTLY CLOSED AND SEALED UNTIL READY FOR USE. AVOID ALL POSSIBLE SOURCES OF IGNITION (SPARK OR FLAME).

DISPOSAL CONSIDERATIONS:

| | |
|---|---|
| WASTE INFORMATION: | WASTE MUST BE DISPOSED OF IN ACCORDANCE WITH FEDERAL PROVINCIAL AND MUNICIPAL ENVIRONMENTAL CONTROL REGULATIONS. |

## FIRST AID MEASURES

| | |
|---|---|
| Skin Contact: | WASH WITH SOAP AND WATER. COVER THE IRRITATED SKIN WITH AN EMOLLIENT. GET MEDICAL ATTENTION IF IRRITATION DEVELOPS. COLD WATER MAY BE USED. |
| Eye Contact: | CHECK FOR AND REMOVE ANY CONTACT LENSES. IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINS. COLD WATER MAY BE USED. GET MEDICAL ATTENTION, IF IRRITATION OCCURS. |
| Inhalation: | IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. GET MEDICAL ATTENTION IF SYMPTOMS APPEAR. |
| Ingestion | DO **NOT** INDUCE VOMITTING UNLESS DIRECTED TO DO SO BY MEDICAL PERSONNEL. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. LOOSEN TIGHT CLOTHING SUCH AS COLLAR, TIE, BELT OR WAISTBAND. GET MEDICAL ATTENTION IF SYMPTOMS APPEAR. |

## PREPARATION INFORMATION

| | |
|---|---|
| Prepared by: | LAB PERSONNEL |
| Date Revised: | JANUARY 2011 |

# Material Safety Data Sheet

## Air1® Diesel Exhaust Fluid -

## Section 1. Chemical product and company identification -

**Trade name** : Air1® Diesel Exhaust Fluid

**Manufacturer** : Yara Belle Plaine, Inc
#2 Kalium Road
P.O Box 39
Belle Plaine, SK
S0G 0G0
Canada
Tel: 1 (306) 345 4200
Fax: 1 (306) 345 2353

**Validation date** : **05.31.2013.**

**Print date** : 05.31.2013.

**Responsible name** : Chao Tan (Plant Support Engineer)

**In case of emergency** : **Tel 1 (306) 345 4288**

## Section 2. Hazards identification -

**Physical state** : Liquid. [Clear.]

**Emergency overview** : NOT EXPECTED TO PRODUCE SIGNIFICANT ADVERSE HEALTH EFFECTS WHEN THE RECOMMENDED INSTRUCTIONS FOR USE ARE FOLLOWED.

**Potential acute health effects**

**Eyes** : No known significant effects or critical hazards.

**Skin** : No known significant effects or critical hazards.

**Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. -

**Ingestion** : No known significant effects or critical hazards. -

**Potential chronic health effects**

**Chronic effects** : No known significant effects or critical hazards.

**Carcinogenic effects** : No known significant effects or critical hazards.

**Mutagenic effects** : No known significant effects or critical hazards.

**Teratogenicity** : No known significant effects or critical hazards.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

**Inhalation** : No specific data.

**Ingestion** : No specific data.

**Skin** : No specific data.

**Eyes** : No specific data.

**See toxicological information (Section 11)**

## Section 3. Composition/information on ingredients

| Name | CAS number | % by weight |
|---|---|---|
| Urea | 57-13-6 | 32.5 |
| Water | 7732-18-5 | 67.5 |

## Section 4. First aid measures

**Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if symptoms occur.

**Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur.

**Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms occur.

**Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

**Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

## Section 5. Fire-fighting measures

**Flammability of the product** : Non-flammable.

**Extinguishing media**

**Suitable** : Use an extinguishing agent suitable for the surrounding fire.

**Products of combustion** : These products are
carbon dioxide
carbon monoxide
nitrogen oxides
Ammonia.

**Fire-fighting media and instructions** : In case of fire, use water spray (fog), foam, dry chemical or $CO_2$.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

**Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment (see Section 8).

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**Methods for cleaning up**

**Small spill** : Stop leak if without risk. Material free from contamination can be used for its original purpose. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

## Section 7. Handling and storage

**Handling** : Avoid contact with eyes, skin and clothing. Ensure eyewash facilities are located close to the working environment.

**Storage** : Keep container tightly closed. Keep container in a cool, well-ventilated area. Keep away from heat and direct sunlight.

## Section 8. Exposure controls/personal protection

**Engineering measures** : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure eyewash facilities are located close to the working environment.

**Personal protection**

**Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: Chemical splash goggles or face shield.

**Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved.

**Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: If ventilation is inadequate, use respirator that will protect against dust/mist.

**Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. >8 hours (breakthrough time): butyl rubber , natural rubber (latex) , nitrile rubber

**Personal protective equipment (Pictograms)** :

| Product name | Exposure limits |
|---|---|
| Urea | **AIHA WEEL (United States, 5/2010).** TWA: 10 mg/m³ 8 hour(s). |

## Section 9. Physical and chemical properties

**Physical state** : Liquid. [Clear.]

**Color** : Colorless.

**Odor** : Ammoniacal. [Slight]

**pH** : 9,8 to 10 [Conc. (% w/w): 10%]

**Boiling/condensation point** : Decomposition temperature: 100°C (212°F)

**Melting/freezing point** : -11,5°C (11,3°F)

**Density (g/cm³)** : 1,09 g/cm³ [20°C (68°F)]

**Vapor pressure** : 6.4 kPa (48 mm Hg) (at 40°C)

**Miscible in water.** : Yes.

## Section 10. Stability and reactivity -

**Stability and reactivity** : Stable under recommended storage and handling conditions (see section 7). -

**Possibility of hazardous reactions** - : Under normal conditions of storage and use, hazardous reactions will not occur. -

**Incompatibility with various substances** : Highly reactive or incompatible with the following materials: oxidizing materials, acids - and alkalis. -

**Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should - not be produced. -

**Hazardous polymerization** : Under normal conditions of storage and use, hazardous polymerization will not occur. -

## Section 11. Toxicological information -

**Potential acute health effects**

**Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. -

**Ingestion** : No known significant effects or critical hazards. -

**Skin contact** : No known significant effects or critical hazards. -

**Eye contact** : No known significant effects or critical hazards. -

| Product/ingredient name - | Result | Species | Dose | Exposure |
|---|---|---|---|---|
| Urea - | LD50 Oral | Mouse | 11 g/kg | - |
| | LD50 Oral | Rat | 8471 mg/kg | - |

## Section 12. Ecological information -

**Environmental effects** : -Readily biodegradable

**Aquatic ecotoxicity**

| Product/ingredient name | Test | Result | Species | Exposure |
|---|---|---|---|---|
| Urea | - | Acute EC50 3910000 ug/L Fresh water | Daphnia - Water flea - Daphnia magna - Neonate - <24 hours | 48 hours |
| | - | Acute LC50 >1000 mg/L Marine water | Crustaceans - Amphipod - Chaetogammarus marinus - Young - 5 mm | 48 hours |
| | - | Acute LC50 16700 to 19600 ug/L Fresh water | Fish - Rohu - Labeo rohita - Egg | 96 hours |

**Conclusion/Summary** - : -Not available.

**Biodegradability** -

**Conclusion/Summary** - : The product does not show any bioaccumulation phenomena.

## Section 13. Disposal considerations -

**Waste disposal** : -The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**Consult your local or regional authorities.**

**Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.**

## Section 14. Transport information

| Regulatory information | UN number | Proper shipping name | Class | Packing group | Label | Additional information |
|---|---|---|---|---|---|---|
| DOT Classification | Not regulated. | - | - | - | | - |
| TDG Classification | Not regulated. | - | - | - | | - |
| Mexico Classification | Not regulated. | - | - | - | | - |

## Section 15. Regulatory information -

**WHMIS,TDG Classification** : Not Regulated

**HCS Classification** : Not regulated.

**U.S. Federal regulations** : **TSCA 8(a) IUR Exempt/Partial exemption**: Not determined
**United States inventory (TSCA 8b)**: All components are listed or exempted.

**SARA 302/304/311/312 extremely hazardous substances**: No products were found.
**SARA 302/304 emergency planning and notification**: No products were found.
**SARA 302/304/311/312 hazardous chemicals**: No products were found.
**SARA 311/312 MSDS distribution - chemical inventory - hazard identification**: No products were found.

**Clean Air Act (CAA) 112 accidental release prevention**: No products were found.

**Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)** : Not listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

**State regulations** : **Connecticut Carcinogen Reporting**: None of the components are listed.
**Connecticut Hazardous Material Survey**: None of the components are listed.
**Florida substances**: None of the components are listed.
**Illinois Chemical Safety Act**: None of the components are listed.
**Illinois Toxic Substances Disclosure to Employee Act**: None of the components are listed.
**Louisiana Reporting**: None of the components are listed.
**Louisiana Spill**: None of the components are listed.
**Massachusetts Spill**: None of the components are listed.
**Massachusetts Substances**: None of the components are listed.
**Michigan Critical Material**: None of the components are listed.
**Minnesota Hazardous Substances**: None of the components are listed.
**New Jersey Hazardous Substances**: None of the components are listed.
**New Jersey Spill**: None of the components are listed.
**New Jersey Toxic Catastrophe Prevention Act**: None of the components are listed.
**New York Acutely Hazardous Substances**: None of the components are listed.
**New York Toxic Chemical Release Reporting**: None of the components are listed.
**Pennsylvania RTK Hazardous Substances**: None of the components are listed.

**Rhode Island Hazardous Substances**: None of the components are listed.

**United States inventory (TSCA 8b)** : All components are listed or exempted.

## Section 16. Other information -

**National Fire Protection Association (U.S.A.)** :


**References** : - Regulation (EC) No 1272/2008 Annex VI
EU REACH IUCLID5 CSR
National Institute for Occupational Safety and Health, U.S. Dept. of Health, Education, and Welfare, Reports and Memoranda
Registry of Toxic Effects of Chemical Substances
Atrion International Inc. 4777 Levy Street, St Laurent, Quebec HAR 2P9, Canada

**Date of issue -** : **05.31.2013**

**Date of previous issue** : **05.31.2013**

**Version -** : **1.01**

**Indicates information that has changed from previously issued version.**

**Notice to reader**

**To the best of our knowledge, the information provided in this Product Information Sheet is accurate as at the date of its issue. The information it contains is being given for safety guidance purposes and relates only to the specific material and uses described in it. This information does not necessarily apply to that material when combined with other material(s) or when used otherwise than as described herein. Final determination of the suitability of any material is the sole responsibility of the user. All materials may represent unknown hazards and should be used with caution. Yara International ASA disclaims any liability for loss or damage resulting from the use of any data, information or recommendations set out in this Product Information Sheet.**

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

| | | |
|---|---|---|
| Product name | : | TRAXON ™ XL SYNTHETIC BLEND 75W-90 |
| Product code | : | TRXL759P20, TRXL759K60, TRXL759IBC, TRXL759DRM, TRXL759DCT, TRXL759C16, TRXL759C12, TRXL759, TRXL759BLK |

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

| | | |
|---|---|---|
| Use of the Substance/Mixture | : | These products are multipurpose automotive hypoid gear lubricants, suitable for use in lower temperatures in passenger cars, trucks and off-highway vehicles. |

### 1.3 Details of the supplier of the safety data sheet

Manufacturer or supplier's details

Petro-Canada Europe Lubricants Limited
Wellington House, Starley Way
Birmingham International Park Solihull B37 7HB
United Kingdom

| | | |
|---|---|---|
| E-mail address of person responsible for the SDS | : | EUSDS@suncor.com |

### 1.4 Emergency telephone number

| | | |
|---|---|---|
| Emergency telephone number | : | Suncor Energy: +1 403-296-3000;<br>Poison Control Centre: Consult local telephone directory for emergency number(s). |

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Classification (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture.

**Classification (67/548/EEC, 1999/45/EC)**

Not a hazardous substance or mixture.

### 2.2 Label elements

**Labelling (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture.

**Additional Labelling:**

EUH210 Safety data sheet available on request.
EUH208 May produce an allergic reaction.
Contains: Polysulfides, di-tert-Bu and Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched)

### 2.3 Other hazards

None known.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

**Hazardous components**

| Chemical Name | CAS-No.<br>EC-No.<br>Registration number | Classification (67/548/EEC) | Classification (REGULATION (EC) No 1272/2008) | Concentration (%) |
|---|---|---|---|---|
| lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based | 72623-86-0<br><br>276-737-9<br>01-2119474878-16-0001 | | Asp. Tox. 1; | 30 - 50 |
| Mineral oil | | | Asp. Tox. 1; H304 | 1 - 10 |
| Polysulfides, di-tert-Bu | 68937-96-2<br><br>273-103-3 | Xi; R38-R43-R52/53 | Aquatic Chronic 3; H412<br>Skin Sens. 1; H317 | 2.5 - 10 |
| Reaction products of bis(4-methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl (branched) | 931-384-6 | Xn-N; R22-R41-R43-R51/53 | Acute Tox. 4; H302<br>Aquatic Chronic 2; H411<br>Eye Dam. 1; H318<br>Skin Sens. 1; H317 | 1 - 2.5 |

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

If inhaled : Move to fresh air.
Artificial respiration and/or oxygen may be necessary.
Seek medical advice.

| | | |
|---|---|---|
| In case of skin contact | : | In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.<br>Wash skin thoroughly with soap and water or use recognized skin cleanser.<br>Wash clothing before reuse.<br>Seek medical advice. |
| In case of eye contact | : | Remove contact lenses.<br>Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.<br>Obtain medical attention. |
| If swallowed | : | Rinse mouth with water.<br>DO NOT induce vomiting unless directed to do so by a physician or poison control center.<br>Never give anything by mouth to an unconscious person.<br>Seek medical advice. |

**4.2 Most important symptoms and effects, both acute and delayed**

| | | |
|---|---|---|
| Risks | : | First aider needs to protect himself. |

**4.3 Indication of any immediate medical attention and special treatment needed**

## SECTION 5: Firefighting measures

**5.1 Extinguishing media**

| | | |
|---|---|---|
| Suitable extinguishing media | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable extinguishing media | : | No information available. |

**5.2 Special hazards arising from the substance or mixture**

| | | |
|---|---|---|
| Specific hazards during firefighting | : | Cool closed containers exposed to fire with water spray. |
| Hazardous combustion products | : | Carbon oxides (CO, CO2), nitrogen oxides (NOx), sulphur oxides (SOx), phosphorus oxides (POx), smoke and irritating vapours as products of incomplete combustion. |

**5.3 Advice for firefighters**

| | | |
|---|---|---|
| Further information | : | Prevent fire extinguishing water from contaminating surface water or the ground water system. |

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Ensure adequate ventilation.
Evacuate personnel to safe areas.
Material can create slippery conditions.
Mark the contaminated area with signs and prevent access to unauthorized personnel.
Only qualified personnel equipped with suitable protective equipment may intervene.

### 6.2 Environmental precautions

Environmental precautions : Do not allow uncontrolled discharge of product into the environment.

### 6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Prevent further leakage or spillage if safe to do so.
Remove all sources of ignition.
Soak up with inert absorbent material.
Non-sparking tools should be used.
Ensure adequate ventilation.
Contact the proper local authorities.

### 6.4 Reference to other sections

For personal protection see section 8.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advice on safe handling : For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Use only with adequate ventilation.
In case of insufficient ventilation, wear suitable respiratory equipment.
Avoid contact with skin, eyes and clothing.
Do not ingest.
Keep away from heat and sources of ignition.
Keep container closed when not in use.

Advice on protection against fire and explosion : None known.

Hygiene measures : Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash face, hands and any

exposed skin thoroughly after handling.

### 7.2 Conditions for safe storage, including any incompatibilities

| | | |
|---|---|---|
| Requirements for storage areas and containers | : | Store in original container. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in a dry, cool and well-ventilated place. Keep in properly labelled containers. To maintain product quality, do not store in heat or direct sunlight. |

### 7.3 Specific end use(s)

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

### 8.2 Exposure controls

**Engineering measures**

No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Personal protective equipment**

| | | |
|---|---|---|
| Eye protection | : | Wear face-shield and protective suit for abnormal processing problems. |
| Hand protection | | |
| Material | : | neoprene, nitrile, polyvinyl alcohol (PVA), Viton(R). |
| Remarks | : | Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. |
| Skin and body protection | : | Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. |
| Respiratory protection | : | Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. |
| Filter type | : | organic vapour filter |
| Protective measures | : | Wash contaminated clothing before re-use.<br>No special protective equipment required. |

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

| | | |
|---|---|---|
| Appearance | : | viscous liquid |
| Colour | : | Colourless to pale yellow. |
| Odour | : | Mild petroleum oil like. |
| Odour Threshold | : | No data available |
| pH | : | No data available |
| Pour point | : | -48 °C (-54 °F) |
| Boiling point/boiling range | : | No data available |
| Flash point | : | 183 °C (361 °F)<br>Method: Cleveland open cup |
| Fire Point | : | No data available |
| Auto-Ignition Temperature | : | No data available |
| Evaporation rate | : | No data available |
| Flammability (solid, gas) | : | Low fire hazard. This material must be heated before ignition will occur. |
| Upper explosion limit | : | No data available |
| Lower explosion limit | : | No data available |
| Vapour pressure | : | No data available |
| Relative vapour density | : | No data available |
| Density | : | 0.8765 kg/l (15 °C / 59 °F) |
| Solubility(ies) | | |
| Water solubility | : | insoluble |
| Partition coefficient: n-octanol/water | : | No data available |
| Viscosity | | |
| Viscosity, kinematic | : | 108.6 cSt (40 °C / 104 °F) |
| | | 16.54 cSt (100 °C / 212 °F) |
| Explosive properties | : | Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. |

### 9.2 Other information

No data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

### 10.2 Chemical stability

### 10.3 Possibility of hazardous reactions

Hazardous reactions : Hazardous polymerisation does not occur.
Stable under normal conditions.

### 10.4 Conditions to avoid

Conditions to avoid : No data available

### 10.5 Incompatible materials

Materials to avoid : Reactive with oxidising agents, acids and alkalis.

### 10.6 Hazardous decomposition products

Hazardous decomposition products : May release COx, H2S, NOx, SOx, methacrylate monomers, aldehydes, alkyl mercaptans, sulfides, smoke and irritating vapours when heated to decomposition.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Information on likely routes of exposure : Eye contact
Ingestion
Inhalation
Skin contact

**Acute toxicity**

**Product:**

Acute oral toxicity : Remarks: No data available

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : Remarks: No data available

**Components:**

**lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:**
Acute oral toxicity : LD50 Rat: > 5,000 mg/kg,

| | | |
|---|---|---|
| Acute inhalation toxicity | : | LC50 Rat: > 5.2 mg/l<br>Exposure time: 4 h<br>Test atmosphere: dust/mist |
| Acute dermal toxicity | : | LD50 Rabbit: > 2,000 mg/kg, |

**Skin corrosion/irritation**

**Product:**

Remarks: No data available

**Components:**

**lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:**
Result: No skin irritation

**Serious eye damage/eye irritation**

**Product:**

Remarks: No data available

**Components:**

**lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:**
Result: No eye irritation

**Respiratory or skin sensitisation**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**STOT - single exposure**

No data available

**STOT - repeated exposure**

No data available

**Aspiration toxicity**

No data available

## SECTION 12: Ecological information

### 12.1 Toxicity

**Product:**

| | | |
|---|---|---|
| Toxicity to fish | : | Remarks: No data available |
| Toxicity to daphnia and other aquatic invertebrates | : | Remarks: No data available |
| Toxicity to algae | : | Remarks: No data available |
| Toxicity to bacteria | : | Remarks: No data available |

### 12.2 Persistence and degradability

**Product:**

| | | |
|---|---|---|
| Biodegradability | : | Remarks: No data available |

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

Not relevant

### 12.6 Other adverse effects

No data available

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

| | | |
|---|---|---|
| Product | : | The product should not be allowed to enter drains, water courses or the soil.<br>Offer surplus and non-recyclable solutions to a licensed disposal company.<br>Waste must be classified and labelled prior to recycling or disposal.<br>Send to a licensed waste management company.<br>Dispose of as hazardous waste in compliance with local and national regulations.<br>Dispose of product residue in accordance with the instructions of the person responsible for waste disposal. |

## SECTION 14: Transport information

**International Regulation**

**IATA-DGR**
Not regulated as a dangerous good

**IMDG-Code**
Not regulated as a dangerous good

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**49 CFR**
Not regulated as a dangerous good
**TDG**
Not regulated as a dangerous good

**Special precautions for user**

Not applicable

## SECTION 15: Regulatory information

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

| | | | |
|---|---|---|---|
| Water contaminating class (Germany) | : | WGK 2 | water endangering |

**The components of this product are reported in the following inventories:**

| | | |
|---|---|---|
| DSL | : | On the inventory, or in compliance with the inventory |
| TSCA | : | All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption. |
| IECSC | : | On the inventory, or in compliance with the inventory |
| EINECS | : | On the inventory, or in compliance with the inventory |

**15.2 Chemical Safety Assessment**

## SECTION 16: Other information

**Full text of R-Phrases**

| | | |
|---|---|---|
| R22 | : | Harmful if swallowed. |
| R38 | : | Irritating to skin. |

| | | |
|---|---|---|
| R41 | : | Risk of serious damage to eyes. |
| R43 | : | May cause sensitisation by skin contact. |
| R51/53 | : | Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |
| R52/53 | : | Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |

**Full text of H-Statements**

| | | |
|---|---|---|
| H302 | : | Harmful if swallowed. |
| H304 | : | May be fatal if swallowed and enters airways. |
| H317 | : | May cause an allergic skin reaction. |
| H318 | : | Causes serious eye damage. |
| H411 | : | Toxic to aquatic life with long lasting effects. |
| H412 | : | Harmful to aquatic life with long lasting effects. |

**Full text of other abbreviations**

| | | |
|---|---|---|
| Acute Tox. | : | Acute toxicity |
| Aquatic Chronic | : | Chronic aquatic toxicity |
| Asp. Tox. | : | Aspiration hazard |
| Eye Dam. | : | Serious eye damage |
| Skin Sens. | : | Skin sensitisation |

| | | |
|---|---|---|
| For Copy of (M)SDS | : | Internet: lubricants.petro-canada.ca/msds<br>Europe, telephone: 00-800-7387-6000<br>For Product Safety Information: 1 905-804-4752 |

Prepared by : Product Safety: +1 905-804-4752

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

# Material Safety Data Sheet

# TRAXON ™ E SYNTHETIC CD-50

**000003000863**

Version 2.0 Revision Date 2015/02/17 Print Date 2015/02/17

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

| | | |
|---|---|---|
| Product name | : | TRAXON ™ E SYNTHETIC CD-50 |
| Product code | : | TRE5P20, TRE5K60, TRE5DRM, TRE5, TRE5DCT |
| Manufacturer or supplier's details | | Petro-Canada Lubricants Inc.<br>2310 Lakeshore Road West<br>Mississauga ON L5J 1K2<br>Canada |
| Emergency telephone number | | Suncor Energy: +1 403-296-3000;<br>Poison Control Centre: Consult local telephone directory for emergency number(s). |

**Recommended use of the chemical and restrictions on use**

| | | |
|---|---|---|
| Recommended use | : | A manual transmission fluid meeting API MT-1 for heavy duty applications. May be used where SAE 50 engine oil is recommended. |
| Prepared by | : | Product Safety: +1 905-804-4752 |

## SECTION 2. HAZARDS IDENTIFICATION

**Emergency Overview**

| | |
|---|---|
| Appearance | viscous liquid |
| Colour | amber |
| Odour | Mild petroleum oil like. |

**Potential Health Effects**

| | | |
|---|---|---|
| Primary Routes of Entry | : | Eye contact<br>Ingestion<br>Inhalation<br>Skin contact |
| Aggravated Medical Condition | : | None known. |

**Carcinogenicity:**

**IARC** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**ACGIH** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential

carcinogen by ACGIH.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

| | | |
|---|---|---|
| Substance / Mixture | : | Mixture |

**Hazardous components**

No hazardous ingredients

## SECTION 4. FIRST AID MEASURES

| | | |
|---|---|---|
| If inhaled | : | Move to fresh air.<br>Artificial respiration and/or oxygen may be necessary.<br>Seek medical advice. |
| In case of skin contact | : | In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.<br>Wash skin thoroughly with soap and water or use recognized skin cleanser.<br>Wash clothing before reuse.<br>Seek medical advice. |
| In case of eye contact | : | Remove contact lenses.<br>Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.<br>Obtain medical attention. |
| If swallowed | : | Rinse mouth with water.<br>DO NOT induce vomiting unless directed to do so by a physician or poison control center.<br>Never give anything by mouth to an unconscious person.<br>Seek medical advice. |
| Most important symptoms and effects, both acute and delayed | : | First aider needs to protect himself. |

## SECTION 5. FIREFIGHTING MEASURES

| | | |
|---|---|---|
| Suitable extinguishing media | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable extinguishing media | : | No information available. |
| Specific hazards during firefighting | : | Cool closed containers exposed to fire with water spray. |

| | | |
|---|---|---|
| Hazardous combustion products | : | Carbon oxides (CO, CO2), nitrogen oxides (NOx), sulphur oxides (SOx), phosphorus oxides (POx), smoke and irritating vapours as products of incomplete combustion. |
| Further information | : | Prevent fire extinguishing water from contaminating surface water or the ground water system. |

## SECTION 6. ACCIDENTAL RELEASE MEASURES

| | | |
|---|---|---|
| Personal precautions, protective equipment and emergency procedures | : | Use personal protective equipment.<br>Ensure adequate ventilation.<br>Evacuate personnel to safe areas.<br>Material can create slippery conditions. |
| Environmental precautions | : | Do not allow uncontrolled discharge of product into the environment. |
| Methods and materials for containment and cleaning up | : | Prevent further leakage or spillage if safe to do so.<br>Remove all sources of ignition.<br>Soak up with inert absorbent material.<br>Non-sparking tools should be used.<br>Ensure adequate ventilation.<br>Contact the proper local authorities. |

## SECTION 7. HANDLING AND STORAGE

| | | |
|---|---|---|
| Advice on safe handling | : | For personal protection see section 8.<br>Smoking, eating and drinking should be prohibited in the application area.<br>Use only with adequate ventilation.<br>In case of insufficient ventilation, wear suitable respiratory equipment.<br>Avoid contact with skin, eyes and clothing.<br>Do not ingest.<br>Keep away from heat and sources of ignition.<br>Keep container closed when not in use. |
| Conditions for safe storage | : | Store in original container.<br>Containers which are opened must be carefully resealed and kept upright to prevent leakage.<br>Keep in a dry, cool and well-ventilated place.<br>Keep in properly labelled containers.<br>To maintain product quality, do not store in heat or direct sunlight. |

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

| | | |
|---|---|---|
| **Engineering measures** | : | No special ventilation requirements. Good general ventilation |

should be sufficient to control worker exposure to airborne contaminants.

**Personal protective equipment**

| | | |
|---|---|---|
| Respiratory protection | : | Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. |
| Filter type | : | organic vapour filter |
| Hand protection | | |
| Material | : | neoprene, nitrile, polyvinyl alcohol (PVA), Viton(R). |
| Remarks | : | Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. |
| Eye protection | : | Wear face-shield and protective suit for abnormal processing problems. |
| Skin and body protection | : | Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. |
| Protective measures | : | Wash contaminated clothing before re-use.<br>No special protective equipment required. |
| Hygiene measures | : | Remove and wash contaminated clothing and gloves, including the inside, before re-use.<br>Wash face, hands and any exposed skin thoroughly after handling. |

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|---|---|---|
| Appearance | : | viscous liquid |
| Colour | : | amber |
| Odour | : | Mild petroleum oil like. |
| Odour Threshold | : | No data available |
| pH | : | No data available |
| Pour point | : | -45 °C (-49 °F)No data available |
| Boiling point/boiling range | : | No data available |
| Flash point | : | 221 °C (430 °F)<br>Method: Cleveland open cup |
| Fire Point | : | No data available |

| | | |
|---|---|---|
| Auto-Ignition Temperature | : | No data available |
| Evaporation rate | : | No data available |
| Flammability | : | Low fire hazard. This material must be heated before ignition will occur. |
| Upper explosion limit | : | No data available |
| Lower explosion limit | : | No data available |
| Vapour pressure | : | No data available |
| Relative vapour density | : | No data available |
| Density | : | 0.86 kg/l (15 °C / 59 °F) |
| Solubility(ies) | | |
| Water solubility | : | insoluble |
| Partition coefficient: n-octanol/water | : | No data available |
| Viscosity | | |
| Viscosity, kinematic | : | 132.0 cSt (40 °C / 104 °F) |
| | | 17.5 cSt (100 °C / 212 °F) |
| Explosive properties | : | Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. |

## SECTION 10. STABILITY AND REACTIVITY

| | | |
|---|---|---|
| Possibility of hazardous reactions | : | Hazardous polymerisation does not occur.<br>Stable under normal conditions. |
| Conditions to avoid | : | No data available |
| Incompatible materials | : | Reactive with oxidising agents, acids and alkalis. |
| Hazardous decomposition products | : | May release COx, NOx, SOx, POx, smoke and irritating vapours when heated to decomposition. |

## SECTION 11. TOXICOLOGICAL INFORMATION

| | | |
|---|---|---|
| Information on likely routes of exposure | : | Eye contact<br>Ingestion<br>Inhalation<br>Skin contact |

**Acute toxicity**

**Product:**

| | | |
|---|---|---|
| Acute oral toxicity | : | Remarks: No data available |
| Acute inhalation toxicity | : | Remarks: No data available |
| Acute dermal toxicity | : | Remarks: No data available |

**Skin corrosion/irritation**

**Product:**

Remarks: No data available

**Serious eye damage/eye irritation**

**Product:**

Remarks: No data available

**Respiratory or skin sensitisation**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**STOT - single exposure**

No data available

**STOT - repeated exposure**

No data available

**Aspiration toxicity**

No data available

## SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Product:**

| | | |
|---|---|---|
| Toxicity to fish | : | Remarks: No data available |
| Toxicity to daphnia and other aquatic invertebrates | : | Remarks: No data available |
| Toxicity to algae | : | Remarks: No data available |
| Toxicity to bacteria | : | Remarks: No data available |

**Persistence and degradability**

**Product:**

Biodegradability : Remarks: No data available

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Other adverse effects**

No data available

## SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal methods**

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Offer surplus and non-recyclable solutions to a licensed disposal company.
Waste must be classified and labelled prior to recycling or disposal.
Send to a licensed waste management company.
Dispose of as hazardous waste in compliance with local and national regulations.
Dispose of product residue in accordance with the instructions of the person responsible for waste disposal.

## SECTION 14. TRANSPORT INFORMATION

**International Regulation**

**IATA-DGR**
Not regulated as a dangerous good

**IMDG-Code**
Not regulated as a dangerous good

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**49 CFR**
Not regulated as a dangerous good

**TDG**
Not regulated as a dangerous good

**Special precautions for user**

Not applicable

## SECTION 15. REGULATORY INFORMATION

**WHMIS Classification** : Not Rated

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

**The components of this product are reported in the following inventories:**

| | |
|---|---|
| **DSL** | On the inventory, or in compliance with the inventory |
| **TSCA** | All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption. |
| **EINECS** | On the inventory, or in compliance with the inventory |
| **IECSC** | On the inventory, or in compliance with the inventory |

## SECTION 16. OTHER INFORMATION

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

| | | |
|---|---|---|
| Product name | : | HYDREX ™ XV ALL SEASON |
| Product code | : | HDXASICT, HDXASP5R, HDXASP20, HDXASIBC, HDXASDRR, HDXASDRM, HDXASDCT, HDXASC16, HDXAS, HDXASBLK |

Manufacturer or supplier's details

Petro-Canada America Lubricants Inc.
115N Oak Park Avenue #1C
Oak Park IL 60301-1366
United States

| | | |
|---|---|---|
| Emergency telephone number | | Suncor Energy: +1 403-296-3000;<br>Poison Control Centre: Consult local telephone directory for emergency number(s). |

**Recommended use of the chemical and restrictions on use**

| | | |
|---|---|---|
| Recommended use | : | Hydrex XV All Season hydraulic oil is a premium hydraulic oil designed for year round use in hydraulic systems that are exposed to wide temperature extremes. It is specifically recommended for woodland, mining, construction, public utility and marine operations eliminating the need for seasonal changeovers. |
| Prepared by | : | Product Safety: +1 905-804-4752 |

## SECTION 2. HAZARDS IDENTIFICATION

**Emergency Overview**

| | |
|---|---|
| Appearance | viscous liquid |
| Colour | Bright, pale yellow. |
| Odour | Mild petroleum oil like. |

**GHS Classification**

Not a hazardous substance or mixture.

**GHS Label element**

Not a hazardous substance or mixture.

**Potential Health Effects**

Primary Routes of Entry : Eye contact
Ingestion
Inhalation
Skin contact

Aggravated Medical Condition : None known.

**Carcinogenicity:**

**IARC** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**ACGIH** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

**OSHA** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**NTP** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

**Hazardous components**

| Chemical Name | CAS-No. | Concentration (%) |
|---|---|---|
| lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based | 72623-86-0 | 30 - 50 % |
| Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts | 68649-42-3 | 1 - 5 % |

## SECTION 4. FIRST AID MEASURES

If inhaled : Artificial respiration and/or oxygen may be necessary.
Move to fresh air.
Seek medical advice.

In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Wash skin thoroughly with soap and water or use recognized skin cleanser.
Wash clothing before reuse.
Seek medical advice.

In case of eye contact : Remove contact lenses.
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Obtain medical attention.

| | | |
|---|---|---|
| If swallowed | : | Rinse mouth with water.<br>DO NOT induce vomiting unless directed to do so by a physician or poison control center.<br>Never give anything by mouth to an unconscious person.<br>Seek medical advice. |
| Most important symptoms and effects, both acute and delayed | : | First aider needs to protect himself. |

## SECTION 5. FIREFIGHTING MEASURES

| | | |
|---|---|---|
| Suitable extinguishing media | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable extinguishing media | : | No information available. |
| Specific hazards during firefighting | : | Cool closed containers exposed to fire with water spray. |
| Hazardous combustion products | : | Carbon oxides (CO, CO2), smoke and irritating vapours as products of incomplete combustion. |
| Further information | : | Prevent fire extinguishing water from contaminating surface water or the ground water system. |

## SECTION 6. ACCIDENTAL RELEASE MEASURES

| | | |
|---|---|---|
| Personal precautions, protective equipment and emergency procedures | : | Use personal protective equipment.<br>Ensure adequate ventilation.<br>Evacuate personnel to safe areas.<br>Material can create slippery conditions. |
| Environmental precautions | : | Do not allow uncontrolled discharge of product into the environment. |
| Methods and materials for containment and cleaning up | : | Prevent further leakage or spillage if safe to do so.<br>Remove all sources of ignition.<br>Soak up with inert absorbent material.<br>Non-sparking tools should be used.<br>Ensure adequate ventilation.<br>Contact the proper local authorities. |

## SECTION 7. HANDLING AND STORAGE

| | | |
|---|---|---|
| Advice on safe handling | : | For personal protection see section 8.<br>Smoking, eating and drinking should be prohibited in the application area.<br>Use only with adequate ventilation. |

In case of insufficient ventilation, wear suitable respiratory equipment.
Avoid contact with skin, eyes and clothing.
Do not ingest.
Keep away from heat and sources of ignition.
Keep container closed when not in use.

Conditions for safe storage : Store in original container.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep in a dry, cool and well-ventilated place.
Keep in properly labelled containers.
To maintain product quality, do not store in heat or direct sunlight.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Components with workplace control parameters**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters / Permissible concentration | Basis |
|---|---|---|---|---|
| lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based | 72623-86-0 | TWA (Mist) | 5 mg/m3 | OSHA Z-1 |
| | | TWA (Inhalable fraction) | 5 mg/m3 | ACGIH |
| | | TWA (Mist) | 5 mg/m3 | OSHA P0 |
| | | TWA (Mist) | 5 mg/m3 | NIOSH REL |
| | | ST (Mist) | 10 mg/m3 | NIOSH REL |

**Engineering measures** : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Personal protective equipment**

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Filter type : organic vapour filter

Hand protection
Material : neoprene, nitrile, polyvinyl alcohol (PVA), Viton(R).

Remarks : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

| | | |
|---|---|---|
| Eye protection | : | Wear face-shield and protective suit for abnormal processing problems. |
| Skin and body protection | : | Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. |
| Protective measures | : | Wash contaminated clothing before re-use.<br>No special protective equipment required. |
| Hygiene measures | : | Remove and wash contaminated clothing and gloves, including the inside, before re-use.<br>Wash face, hands and any exposed skin thoroughly after handling. |

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|---|---|---|
| Appearance | : | viscous liquid |
| Colour | : | Bright, pale yellow. |
| Odour | : | Mild petroleum oil like. |
| Odour Threshold | : | No data available |
| pH | : | No data available |
| Pour point | : | -48 °C (-54 °F) |
| Boiling point/boiling range | : | No data available |
| Flash point | : | 227 °C (441 °F)<br>Method: Cleveland open cup |
| Fire Point | : | No data available |
| Auto-Ignition Temperature | : | No data available |
| Evaporation rate | : | No data available |
| Flammability | : | Low fire hazard. This material must be heated before ignition will occur. |
| Upper explosion limit | : | No data available |
| Lower explosion limit | : | No data available |
| Vapour pressure | : | No data available |
| Relative vapour density | : | No data available |
| Density | : | 0.8488 kg/l (15 °C / 59 °F) |
| Solubility(ies) | | |
| Water solubility | : | insoluble |
| Partition coefficient: n-octanol/water | : | No data available |
| Viscosity | | |

| | | |
|---|---|---|
| Viscosity, kinematic | : | 47.9 cSt (40 °C / 104 °F)<br>9.67 cSt (100 °C / 212 °F) |
| Explosive properties | : | Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. |

## SECTION 10. STABILITY AND REACTIVITY

| | | |
|---|---|---|
| Possibility of hazardous reactions | : | Hazardous polymerisation does not occur.<br>Stable under normal conditions. |
| Conditions to avoid | : | No data available |
| Incompatible materials | : | Reactive with oxidising agents and reducing agents. |
| Hazardous decomposition products | : | May release COx, H2S, metal oxides, methacrylate monomers, smoke and irritating vapours when heated to decomposition. |

## SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure: Eye contact, Ingestion, Inhalation, Skin contact

**Acute toxicity**

**Product:**

| | |
|---|---|
| Acute oral toxicity | Remarks: No data available |
| Acute inhalation toxicity | Remarks: No data available |
| Acute dermal toxicity | Remarks: No data available |

**Components:**

**lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:**

| | |
|---|---|
| Acute oral toxicity | LD50 (Rat): > 5,000 mg/kg |
| Acute inhalation toxicity | LC50 (Rat): > 5.2 mg/l<br>Exposure time: 4 h<br>Test atmosphere: dust/mist |
| Acute dermal toxicity | LD50 (Rabbit): > 2,000 mg/kg |

**Skin corrosion/irritation**

**Product:**

Remarks: No data available

**Serious eye damage/eye irritation**

**Product:**

Remarks: No data available

**Respiratory or skin sensitisation**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**STOT - single exposure**

No data available

**STOT - repeated exposure**

No data available

## SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Product:**

| | | |
|---|---|---|
| Toxicity to fish | : | Remarks: No data available |
| Toxicity to daphnia and other aquatic invertebrates | : | Remarks: No data available |
| Toxicity to algae | : | Remarks: No data available |
| Toxicity to bacteria | : | Remarks: No data available |

**Persistence and degradability**

**Product:**

| | | |
|---|---|---|
| Biodegradability | : | Remarks: No data available |

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Other adverse effects**

No data available

## SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal methods**

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Offer surplus and non-recyclable solutions to a licensed disposal company.
Waste must be classified and labelled prior to recycling or disposal.
Send to a licensed waste management company.
Dispose of as hazardous waste in compliance with local and national regulations.
Dispose of product residue in accordance with the instructions of the person responsible for waste disposal.

## SECTION 14. TRANSPORT INFORMATION

**International Regulation**

**IATA-DGR**
Not regulated as a dangerous good

**IMDG-Code**
Not regulated as a dangerous good

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**49 CFR**
Not regulated as a dangerous good
**TDG**
Not regulated as a dangerous good

**Special precautions for user**

Not applicable

## SECTION 15. REGULATORY INFORMATION

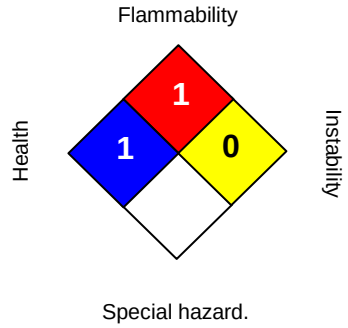
**The components of this product are reported in the following inventories:**

| | |
|---|---|
| **DSL** | On the inventory, or in compliance with the inventory |
| **TSCA** | All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption. |
| **IECSC** | On the inventory, or in compliance with the inventory |
| **EINECS** | On the inventory, or in compliance with the inventory |

## SECTION 16. OTHER INFORMATION

**Further information**

**NFPA:**




**HMIS III:**

| | |
|---|---|
| HEALTH | 1 |
| FLAMMABILITY | 1 |
| PHYSICAL HAZARD | 0 |
| PERSONAL PROTECTION | B |

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

For Copy of (M)SDS : Internet: lubricants.petro-canada.ca/msds
United States, telephone: 1-800-268-5850; fax: 1-800-201-6285
For Product Safety Information: 1 905-804-4752

Prepared by : Product Safety: +1 905-804-4752

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

| | | |
|---|---|---|
| Product name | : | DURATRAN TM/MC SYNTHETIC |
| Product code | : | DTRANSYP20, DTRANSYDRM, DTRANSYDCT, DTRANSY, DTRANSYBLK |

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

| | | |
|---|---|---|
| Use of the Substance/Mixture | : | A synthetic All Season heavy duty transmission / hydraulic fluid designed for use in farm tractors, agricultural machinery, off-highway and construction equipment, with a common oil system for transmission, differential, final drives, hydraulics, wet brake and power steering mechanisms. |

### 1.3 Details of the supplier of the safety data sheet

Manufacturer or supplier's details

Petro-Canada Europe Lubricants Limited
Wellington House, Starley Way
Birmingham International Park Solihull B37 7HB
United Kingdom

| | | |
|---|---|---|
| E-mail address of person responsible for the SDS | : | EUSDS@suncor.com |

### 1.4 Emergency telephone number

| | | |
|---|---|---|
| Emergency telephone number | : | Suncor Energy: +1 403-296-3000;<br>Poison Control Centre: Consult local telephone directory for emergency number(s). |

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Classification (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture.

**Classification (67/548/EEC, 1999/45/EC)**

Not a hazardous substance or mixture.

### 2.2 Label elements

**Labelling (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture.

**Additional Labelling:**

EUH208 May produce an allergic reaction.
EUH210 Safety data sheet available on request.
Contains: C14-18 alpha-olefin epoxide, reaction products with boric acid

### 2.3 Other hazards

None known.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

**Hazardous components**

| Chemical Name | CAS-No.<br>EC-No.<br>Registration number | Classification (67/548/EEC) | Classification (REGULATION (EC) No 1272/2008) | Concentration (%) |
|---|---|---|---|---|
| distillates (petroleum), hydrotreated heavy paraffinic | 64742-54-7<br><br>265-157-1<br>01-2119484627-25-0055 | | Asp. Tox. 1; H304 | 50 - 70 |
| distillates (petroleum), hydrotreated light paraffinic | 64742-55-8<br><br>265-158-7 | | Asp. Tox. 1; H304 | 50 - 70 |
| lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based | 72623-86-0<br><br>276-737-9<br>01-2119474878-16-0001 | | Asp. Tox. 1; | 10 - 20 |
| Mineral oil | | | Asp. Tox. 1; H304 | 1 - 10 |
| Polymer | | | Eye irr/damage 2; H319 | 1 - 3 |
| zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) | 4259-15-8<br><br>224-235-5 | Xi-N; Xi-N; R41-R51/53 | Eye irr/damage 1; H318<br>Aquatic Chronic 2; H411 | 1 - 2.5 |
| C14-18 alpha-olefin | | Xi; R43 | Skin Sens. 1B; | 0.1 - 1 |

| | | | | |
|---|---|---|---|---|
| epoxide, reaction products with boric acid | | | H317 | |

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

If inhaled : Move to fresh air.
Artificial respiration and/or oxygen may be necessary.
Seek medical advice.

In case of skin contact : In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Wash skin thoroughly with soap and water or use recognized skin cleanser.
Wash clothing before reuse.
Seek medical advice.

In case of eye contact : Remove contact lenses.
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Obtain medical attention.

If swallowed : Rinse mouth with water.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.
Never give anything by mouth to an unconscious person.
Seek medical advice.

### 4.2 Most important symptoms and effects, both acute and delayed

Risks : First aider needs to protect himself.

### 4.3 Indication of any immediate medical attention and special treatment needed

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : No information available.

### 5.2 Special hazards arising from the substance or mixture

Specific hazards during : Cool closed containers exposed to fire with water spray.

firefighting

| | | |
|---|---|---|
| Hazardous combustion products | : | Carbon oxides (CO, CO2), nitrogen oxides (NOx), sulphur oxides (SOx), phosphorus oxides (POx), calcium oxides (CaOx), zinc oxides (ZnOx), smoke and irritating vapours as products of incomplete combustion. |

**5.3 Advice for firefighters**

| | | |
|---|---|---|
| Further information | : | Prevent fire extinguishing water from contaminating surface water or the ground water system. |

## SECTION 6: Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures**

| | | |
|---|---|---|
| Personal precautions | : | Use personal protective equipment.<br>Ensure adequate ventilation.<br>Evacuate personnel to safe areas.<br>Material can create slippery conditions.<br>Mark the contaminated area with signs and prevent access to unauthorized personnel.<br>Only qualified personnel equipped with suitable protective equipment may intervene. |

**6.2 Environmental precautions**

| | | |
|---|---|---|
| Environmental precautions | : | If the product contaminates rivers and lakes or drains inform respective authorities. |

**6.3 Methods and material for containment and cleaning up**

| | | |
|---|---|---|
| Methods for cleaning up | : | Prevent further leakage or spillage if safe to do so.<br>Remove all sources of ignition.<br>Soak up with inert absorbent material.<br>Non-sparking tools should be used.<br>Ensure adequate ventilation.<br>Contact the proper local authorities. |

**6.4 Reference to other sections**

For personal protection see section 8.

## SECTION 7: Handling and storage

**7.1 Precautions for safe handling**

| | | |
|---|---|---|
| Advice on safe handling | : | For personal protection see section 8.<br>Smoking, eating and drinking should be prohibited in the application area.<br>In case of insufficient ventilation, wear suitable respiratory |

equipment.
Avoid contact with skin, eyes and clothing.
Do not ingest.
Keep away from heat and sources of ignition.
Keep container closed when not in use.

| | | |
|---|---|---|
| Advice on protection against fire and explosion | : | None known. |
| Hygiene measures | : | Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash face, hands and any exposed skin thoroughly after handling. |

### 7.2 Conditions for safe storage, including any incompatibilities

| | | |
|---|---|---|
| Requirements for storage areas and containers | : | Store in original container. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in a dry, cool and well-ventilated place. Keep in properly labelled containers. To maintain product quality, do not store in heat or direct sunlight. |

### 7.3 Specific end use(s)

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

### 8.2 Exposure controls

**Engineering measures**

No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Personal protective equipment**

| | | |
|---|---|---|
| Eye protection | : | Wear face-shield if splashing hazard is likely. |
| Hand protection | | |
| Material | : | neoprene, nitrile, polyvinyl alcohol (PVA), Viton(R). |
| Remarks | : | Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. |
| Skin and body protection | : | Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. |
| Respiratory protection | : | Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Respirator selection must be based on known or anticipated |

| | | |
|---|---|---|
| | | exposure levels, the hazards of the product and the safe working limits of the selected respirator. |
| Filter type | : | organic vapour filter |
| Protective measures | : | Wash hands and face before breaks and immediately after handling the product.<br>Wash contaminated clothing before re-use.<br>Ensure that eyewash station and safety shower are proximal to the work-station location. |

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

| | | |
|---|---|---|
| Appearance | : | viscous liquid |
| Colour | : | amber |
| Odour | : | No odour or slight petroleum oil like. |
| Odour Threshold | : | No data available |
| pH | : | No data available |
| Pour point | : | -46.5 °C (-51.7 °F) |
| Boiling point/boiling range | : | No data available |
| Flash point | : | 225 °C (437 °F)<br>Method: Cleveland open cup |
| Fire Point | : | 253 °C (487 °F) |
| Auto-Ignition Temperature | : | No data available |
| Evaporation rate | : | No data available |
| Flammability (solid, gas) | : | Low fire hazard. This material must be heated before ignition will occur. |
| Upper explosion limit | : | No data available |
| Lower explosion limit | : | No data available |
| Vapour pressure | : | No data available |
| Relative vapour density | : | No data available |
| Density | : | 0.8525 kg/l (15 °C / 59 °F) |
| Solubility(ies) | | |
| Water solubility | : | insoluble |
| Partition coefficient: n-octanol/water | : | No data available |

Viscosity

| | | |
|---|---|---|
| Viscosity, kinematic | : | 46.79 cSt (40 °C / 104 °F) |
| | | 9.986 cSt (100 °C / 212 °F) |
| Explosive properties | : | Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. |

**9.2 Other information**

No data available

## SECTION 10: Stability and reactivity

**10.1 Reactivity**

**10.2 Chemical stability**

**10.3 Possibility of hazardous reactions**

| | | |
|---|---|---|
| Hazardous reactions | : | Hazardous polymerisation does not occur.<br>Stable under normal conditions. |

**10.4 Conditions to avoid**

| | | |
|---|---|---|
| Conditions to avoid | : | No data available |

**10.5 Incompatible materials**

| | | |
|---|---|---|
| Materials to avoid | : | Reactive with oxidising agents, reducing agents and acids. |

**10.6 Hazardous decomposition products**

| | | |
|---|---|---|
| Hazardous decomposition products | : | May release COx, H2S, aldehydes, alkyl mercaptans, sulfides, methacrylate monomers, smoke and irritating vapours when heated to decomposition. |

## SECTION 11: Toxicological information

**11.1 Information on toxicological effects**

| | | |
|---|---|---|
| Information on likely routes of exposure | : | Eye contact<br>Ingestion<br>Inhalation<br>Skin contact |

**Acute toxicity**

**Product:**

Acute oral toxicity : Remarks: No data available

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : Remarks: No data available

**Components:**

**lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:**
Acute oral toxicity : LD50 Rat: > 5,000 mg/kg,

Acute inhalation toxicity : LC50 Rat: > 5.2 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 Rabbit: > 2,000 mg/kg,

**Skin corrosion/irritation**

**Product:**

Remarks: No data available

**Components:**

**lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:**
Result: Mild skin irritation

**Serious eye damage/eye irritation**

**Product:**

Remarks: No data available

**Components:**

**lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based:**
Result: Mild eye irritation

**Respiratory or skin sensitisation**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**STOT - single exposure**

No data available

**STOT - repeated exposure**

No data available

**Aspiration toxicity**

No data available

## SECTION 12: Ecological information

### 12.1 Toxicity

**Product:**

| | | |
|---|---|---|
| Toxicity to fish | : | Remarks: No data available |
| Toxicity to daphnia and other aquatic invertebrates | : | Remarks: No data available |
| Toxicity to algae | : | Remarks: No data available |
| Toxicity to bacteria | : | Remarks: No data available |

### 12.2 Persistence and degradability

**Product:**

| | | |
|---|---|---|
| Biodegradability | : | Remarks: No data available |

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

Not relevant

### 12.6 Other adverse effects

No data available

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

| | | |
|---|---|---|
| Product | : | The product should not be allowed to enter drains, water courses or the soil.<br>Offer surplus and non-recyclable solutions to a licensed disposal company.<br>Waste must be classified and labelled prior to recycling or disposal.<br>Send to a licensed waste management company.<br>Dispose of as hazardous waste in compliance with local and national regulations.<br>Dispose of product residue in accordance with the instructions of the person responsible for waste disposal. |

## SECTION 14: Transport information

**International Regulation**

**IATA-DGR**
Not regulated as a dangerous good

**IMDG-Code**
Not regulated as a dangerous good

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**49 CFR**
Not regulated as a dangerous good
**TDG**
Not regulated as a dangerous good

**Special precautions for user**

Not applicable

## SECTION 15: Regulatory information

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

**The components of this product are reported in the following inventories:**

| | | |
|---|---|---|
| DSL | : | On the inventory, or in compliance with the inventory |
| TSCA | : | All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption. |
| IECSC | : | On the inventory, or in compliance with the inventory |
| EINECS | : | On the inventory, or in compliance with the inventory |

**15.2 Chemical Safety Assessment**

## SECTION 16: Other information

**Full text of R-Phrases**

| | | |
|---|---|---|
| R41 | : | Risk of serious damage to eyes. |
| R43 | : | May cause sensitisation by skin contact. |
| R51/53 | : | Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |

**Full text of H-Statements**

| | | |
|---|---|---|
| H304 | : | May be fatal if swallowed and enters airways. |
| H317 | : | May cause an allergic skin reaction. |
| H318 | : | Causes serious eye damage. |
| H319 | : | Causes serious eye irritation. |
| H411 | : | Toxic to aquatic life with long lasting effects. |

**Full text of other abbreviations**

| | | |
|---|---|---|
| Aquatic Chronic | : | Chronic aquatic toxicity |
| Asp. Tox. | : | Aspiration hazard |
| Eye irr/damage | : | Serious eye damage/eye irritation |
| Skin Sens. | : | Skin sensitisation |

| | | |
|---|---|---|
| For Copy of (M)SDS | : | Internet: lubricants.petro-canada.ca/msds<br>Europe, telephone: 00-800-7387-6000<br>For Product Safety Information: 1 905-804-4752 |

| | | |
|---|---|---|
| Prepared by | : | Product Safety: +1 905-804-4752 |

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# SAFETY DATA SHEET

## 1. Identification

**Product identifier** **Motor Medic Air Brake System Anti-Freeze & Rust Guard**

**Other means of identification**

**SDS number** M2832

**Part No.** M2832, M2834

**Tariff code** 3820.00.0000

**Recommended use** Air Brake Anti-Freeze

**Recommended restrictions** None known.

**Manufacturer/Importer/Supplier/Distributor information**

**Manufacturer**

**Company name** RSC Chemical Solutions

**Address** 600 Radiator Road
Indian Trail, NC 28079
United States

**Telephone** Customer Service: (704) 821-7643
Technical: (704) 684-1811

**Website** www.rscbrands.com

**E-mail** sds@rscbrands.com

**Emergency phone number** Emergency Telephone: (303) 623-5716
Emergency Contact: RMPDC (877-740-5015)

## 2. Hazard(s) identification

| | | |
|---|---|---|
| **Physical hazards** | Flammable liquids | Category 2 |
| **Health hazards** | Acute toxicity, oral | Category 3 |
| | Acute toxicity, dermal | Category 3 |
| | Acute toxicity, inhalation | Category 3 |
| | Serious eye damage/eye irritation | Category 2A |
| | Reproductive toxicity | Category 2 |
| | Specific target organ toxicity, single exposure | Category 1 |
| | Specific target organ toxicity, repeated exposure | Category 1 |

**Environmental hazards** Not classified.

**OSHA defined hazards** Not classified.

**Label elements**

**Signal word** Danger

**Hazard statement** Highly flammable liquid and vapor. Toxic if swallowed. Toxic in contact with skin. Causes serious eye irritation. Toxic if inhaled. Suspected of damaging fertility or the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure.

**Precautionary statement**

**Prevention** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

| | |
|---|---|
| **Response** | If swallowed: Immediately call a poison center/doctor. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center/doctor. Rinse mouth. If eye irritation persists: Get medical advice/attention. Take off immediately all contaminated clothing and wash it before reuse. In case of fire: Use appropriate media to extinguish. |
| **Storage** | Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up. |
| **Disposal** | Dispose of contents/container in accordance with local/regional/national/international regulations. |
| **Hazard(s) not otherwise classified (HNOC)** | Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion. |
| **Supplemental information** | 0.11% of the mixture consists of component(s) of unknown acute oral toxicity. 0.4% of the mixture consists of component(s) of unknown acute dermal toxicity. 0.11% of the mixture consists of component(s) of unknown acute inhalation toxicity. |

## 3. Composition/information on ingredients

**Mixtures**

| Chemical name | Common name and synonyms | CAS number | % |
|---|---|---|---|
| METHANOL | | 67-56-1 | 90 - 100 |
| Other components below reportable levels | | | < 1 |

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

## 4. First-aid measures

| | |
|---|---|
| **Inhalation** | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a POISON CENTER or doctor/physician. |
| **Skin contact** | Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical advice/attention if you feel unwell. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse. |
| **Eye contact** | Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. |
| **Ingestion** | Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. |
| **Most important symptoms/effects, acute and delayed** | Dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Prolonged exposure may cause chronic effects. |
| **Indication of immediate medical attention and special treatment needed** | Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed. |
| **General information** | Take off immediately all contaminated clothing. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse. |

## 5. Fire-fighting measures

| | |
|---|---|
| **Suitable extinguishing media** | Alcohol resistant foam. Water fog. Carbon dioxide (CO2). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only. |
| **Unsuitable extinguishing media** | Do not use water jet as an extinguisher, as this will spread the fire. |

| | |
|---|---|
| **Specific hazards arising from the chemical** | Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed. |
| **Special protective equipment and precautions for firefighters** | Self-contained breathing apparatus and full protective clothing must be worn in case of fire. |
| **Fire fighting equipment/instructions** | In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. |
| **Specific methods** | Use standard firefighting procedures and consider the hazards of other involved materials. |
| **General fire hazards** | Highly flammable liquid and vapor. |

## 6. Accidental release measures

| | |
|---|---|
| **Personal precautions, protective equipment and emergency procedures** | Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Transfer by mechanical means such as vacuum truck to a salvage tank or other suitable container for recovery or safe disposal. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS. |
| **Methods and materials for containment and cleaning up** | Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material.<br><br>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.<br><br>Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.<br><br>Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. |
| **Environmental precautions** | Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination. |

## 7. Handling and storage

| | |
|---|---|
| **Precautions for safe handling** | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.<br><br>For additional information on equipment bonding and grounding, refer to the Canadian Electrical Code in Canada, (CSA C22.1), or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity" or National Fire Protection Association (NFPA) 70, "National Electrical Code". |

**Conditions for safe storage, including any incompatibilities**

Store locked up. Keep away from heat, sparks and open flame. Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep out of the reach of children. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

**Occupational exposure limits**

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

| Components | Type | Value |
|---|---|---|
| METHANOL (CAS 67-56-1) | PEL | 260 mg/m3<br>200 ppm |

**US. ACGIH Threshold Limit Values**

| Components | Type | Value |
|---|---|---|
| METHANOL (CAS 67-56-1) | STEL | 250 ppm |
| | TWA | 200 ppm |

**US. NIOSH: Pocket Guide to Chemical Hazards**

| Components | Type | Value |
|---|---|---|
| METHANOL (CAS 67-56-1) | STEL | 325 mg/m3<br>250 ppm |
| | TWA | 260 mg/m3<br>200 ppm |

**Biological limit values**

**ACGIH Biological Exposure Indices**

| Components | Value | Determinant | Specimen | Sampling Time |
|---|---|---|---|---|
| METHANOL (CAS 67-56-1) | 15 mg/l | Methanol | Urine | * |

* - For sampling details, please see the source document.

**Exposure guidelines**

**US - California OELs: Skin designation**

METHANOL (CAS 67-56-1) Can be absorbed through the skin.

**US - Minnesota Haz Subs: Skin designation applies**

METHANOL (CAS 67-56-1) Skin designation applies.

**US - Tennessee OELs: Skin designation**

METHANOL (CAS 67-56-1) Can be absorbed through the skin.

**US ACGIH Threshold Limit Values: Skin designation**

METHANOL (CAS 67-56-1) Can be absorbed through the skin.

**US NIOSH Pocket Guide to Chemical Hazards: Skin designation**

METHANOL (CAS 67-56-1) Can be absorbed through the skin.

**Appropriate engineering controls**

Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station. Eye wash fountain and emergency showers are recommended.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** wear safety glasses with side shields (or goggles)

**Skin protection**

**Hand protection** Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

**Other** Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

**Respiratory protection** Chemical respirator with organic vapor cartridge and full facepiece if threshold limits are exceeded.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

When using do not smoke. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

| | |
|---|---|
| **Appearance** | Clear. |
| **Physical state** | Liquid. |
| **Form** | Liquid. |
| **Color** | Blue |
| **Odor** | Alcohol ammonia |
| **Odor threshold** | Not available. |
| **pH** | Not available. |
| **Melting point/freezing point** | -144.04 °F (-97.8 °C) estimated |
| **Initial boiling point and boiling range** | 148.46 °F (64.7 °C) estimated |
| **Flash point** | 54.0 °F (12.2 °C) Tag Closed Cup |
| **Evaporation rate** | Not available. |
| **Flammability (solid, gas)** | Not applicable. |
| **Upper/lower flammability or explosive limits** | |
| **Flammability limit - lower (%)** | 7.3 % estimated |
| **Flammability limit - upper (%)** | 36 % estimated |
| **Explosive limit - lower (%)** | Not available. |
| **Explosive limit - upper (%)** | Not available. |
| **Vapor pressure** | 169.3 hPa estimated |
| **Vapor density** | Not available. |
| **Relative density** | Not available. |
| **Solubility(ies)** | |
| **Solubility (water)** | Not available. |
| **Partition coefficient (n-octanol/water)** | Not available. |
| **Auto-ignition temperature** | 464 °F (240 °C) estimated |
| **Decomposition temperature** | Not available. |
| **Viscosity** | Not available. |
| **Other information** | |
| **Density** | 6.59 lbs/gal |
| **Explosive properties** | Not explosive. |
| **Flammability class** | Flammable IB estimated |
| **Oxidizing properties** | Not oxidizing. |
| **Percent volatile** | 99.6 % estimated |
| **Specific gravity** | 0.79 |
| **VOC (Weight %)** | 99.6 % estimated |

## 10. Stability and reactivity

| | |
|---|---|
| **Reactivity** | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| **Chemical stability** | Material is stable under normal conditions. |
| **Possibility of hazardous reactions** | No dangerous reaction known under conditions of normal use. |
| **Conditions to avoid** | Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials. |
| **Incompatible materials** | Strong oxidizing agents. |
| **Hazardous decomposition products** | No hazardous decomposition products are known. |

## 11. Toxicological information

**Information on likely routes of exposure**

| | |
|---|---|
| **Inhalation** | Toxic if inhaled. May cause damage to organs by inhalation. May cause damage to organs through prolonged or repeated exposure by inhalation. |
| **Skin contact** | Toxic in contact with skin. |
| **Eye contact** | Causes serious eye irritation. |
| **Ingestion** | Toxic if swallowed. |
| **Symptoms related to the physical, chemical and toxicological characteristics** | Headache. Dizziness. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. |

**Information on toxicological effects**

**Acute toxicity** Toxic if inhaled. Toxic in contact with skin. Toxic if swallowed.

| Components | Species | Test Results |
|---|---|---|
| METHANOL (CAS 67-56-1) | | |
| **Acute** | | |
| **Dermal** | | |
| LD50 | Rabbit | 15800 mg/kg |
| **Inhalation** | | |
| LC50 | Cat | 85.41 mg/l, 4.5 Hours |
| | | 43.68 mg/l, 6 Hours |
| | Rat | 64000 ppm, 4 Hours |
| | | 87.5 mg/l, 6 Hours |
| **Oral** | | |
| LD50 | Dog | 8000 mg/kg |
| | Monkey | 2 g/kg |
| | Mouse | 7300 mg/kg |
| | Rabbit | 14.4 g/kg |
| | Rat | 5628 mg/kg |

* Estimates for product may be based on additional component data not shown.

| | |
|---|---|
| **Skin corrosion/irritation** | Prolonged skin contact may cause temporary irritation. |
| **Serious eye damage/eye irritation** | Causes serious eye irritation. |
| **Respiratory or skin sensitization** | |
| **Respiratory sensitization** | Not a respiratory sensitizer. |
| **Skin sensitization** | This product is not expected to cause skin sensitization. |
| **Germ cell mutagenicity** | No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. |
| **Carcinogenicity** | This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. |

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

| | |
|---|---|
| **Reproductive toxicity** | Suspected of damaging fertility or the unborn child. |
| **Specific target organ toxicity - single exposure** | Causes damage to organs. |
| **Specific target organ toxicity - repeated exposure** | Causes damage to organs through prolonged or repeated exposure. |
| **Aspiration hazard** | Not an aspiration hazard. |
| **Chronic effects** | Causes damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. |

## 12. Ecological information

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

| Components | | Species | Test Results |
|---|---|---|---|
| METHANOL (CAS 67-56-1) | | | |
| **Aquatic** | | | |
| Crustacea | EC50 | Water flea (Daphnia magna) | > 10000 mg/l, 48 hours |
| Fish | LC50 | Fathead minnow (Pimephales promelas) | > 100 mg/l, 96 hours |

* Estimates for product may be based on additional component data not shown.

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential**

**Partition coefficient n-octanol / water (log Kow)**
METHANOL -0.77

**Mobility in soil** No data available.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

## 13. Disposal considerations

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

**DOT**

**UN number** Not available.
**UN proper shipping name** Consumer Commodity
**Transport hazard class(es)**
**Class** ORM-D
**Subsidiary risk** -
**Packing group** Not applicable.
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**IATA**

**UN number** UN1230
**UN proper shipping name** Methanol
**Transport hazard class(es)**
**Class** 3
**Subsidiary risk** 6.1
**Packing group** Not applicable.
**Environmental hazards** No.
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.
**Other information**
**Passenger and cargo aircraft** Forbidden.
**Cargo aircraft only** Forbidden.

**IMDG**

**UN number** UN1230
**UN proper shipping name** METHANOL SOLUTION (METHANOL)
**Transport hazard class(es)**
**Class** 3

| | |
|---|---|
| **Subsidiary risk** | 6.1(PGI, II) |
| **Packing group** | II |
| **Environmental hazards** | |
| **Marine pollutant** | No. |
| **EmS** | F-E, S-D |
| **Special precautions for user** | Read safety instructions, SDS and emergency procedures before handling. |
| **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** | Not established. |

**IATA; IMDG**


## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

METHANOL (CAS 67-56-1) Listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**

| Chemical name | CAS number | % by wt. |
|---|---|---|
| METHANOL | 67-56-1 | 90 - 100 |

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

METHANOL (CAS 67-56-1)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**US state regulations**

**US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**

Not listed.

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

METHANOL (CAS 67-56-1)

**US. Massachusetts RTK - Substance List**

METHANOL (CAS 67-56-1)

**US. New Jersey Worker and Community Right-to-Know Act**

METHANOL (CAS 67-56-1)

**US. Pennsylvania Worker and Community Right-to-Know Law**

METHANOL (CAS 67-56-1)

**US. Rhode Island RTK**

METHANOL (CAS 67-56-1)

**US. California Proposition 65**

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

**US - California Proposition 65 - CRT: Listed date/Developmental toxin**

METHANOL (CAS 67-56-1) Listed: March 16, 2012

**International Inventories**

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|---|---|---|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | Yes |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | No |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | No |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

**Issue date** 05-06-2015

**Revision date** 01-19-2016

**Version #** 02

**HMIS® ratings** Health: 4*
Flammability: 3
Physical hazard: 0

**NFPA ratings** Health: 4
Flammability: 3
Instability: 0

**NFPA ratings**


**Disclaimer** The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

| | |
|---|---|
| **Revision Information** | Exposure controls/personal protection: Eye/face protection<br>Exposure controls/personal protection: Respiratory protection<br>Physical & Chemical Properties: Multiple Properties<br>Regulatory Information: TSCA 12b Exported Products<br>Regulatory information: US federal regulations<br>HazReg Data: International Inventories |

# Material Safety Data Sheet

# ENDURATEX TM/MC EP 32

**000003000939**

Version 2.0 | Revision Date 2015/03/12 | Print Date 2015/03/12

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

| | | |
|---|---|---|
| Product name | : | ENDURATEX TM/MC EP 32 |
| Product code | : | ENT32, ENT32DRM |
| Manufacturer or supplier's details | | Petro-Canada Lubricants Inc.<br>2310 Lakeshore Road West<br>Mississauga ON L5J 1K2<br>Canada |
| Emergency telephone number | | Suncor Energy: +1 403-296-3000;<br>Poison Control Centre: Consult local telephone directory for emergency number(s). |

**Recommended use of the chemical and restrictions on use**

| | | |
|---|---|---|
| Recommended use | : | ENDURATEX EP oils are heavy duty extreme pressure gear oils for use in enclosed industrial gear drives operating under normal, heavy, or shock loading conditions. They are also recommended for lubricating plain or anti-friction bearings running under heavy or shock loading conditions. |
| Prepared by | : | Product Safety: +1 905-804-4752 |

## SECTION 2. HAZARDS IDENTIFICATION

**Emergency Overview**

| | |
|---|---|
| Appearance | viscous liquid |
| Colour | amber |
| Odour | Mild petroleum oil like. |

**Potential Health Effects**

| | | |
|---|---|---|
| Primary Routes of Entry | : | Eye contact<br>Ingestion<br>Inhalation<br>Skin contact |
| Aggravated Medical Condition | : | None known. |

**Carcinogenicity:**

**IARC** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

| | |
|---|---|
| **ACGIH** | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. |

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

**Hazardous components**

No hazardous ingredients

## SECTION 4. FIRST AID MEASURES

| | | |
|---|---|---|
| If inhaled | : | Move to fresh air.<br>Artificial respiration and/or oxygen may be necessary.<br>Seek medical advice. |
| In case of skin contact | : | In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.<br>Wash skin thoroughly with soap and water or use recognized skin cleanser.<br>Wash clothing before reuse.<br>Seek medical advice. |
| In case of eye contact | : | Remove contact lenses.<br>Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.<br>Obtain medical attention. |
| If swallowed | : | Rinse mouth with water.<br>DO NOT induce vomiting unless directed to do so by a physician or poison control center.<br>Never give anything by mouth to an unconscious person.<br>Seek medical advice. |
| Most important symptoms and effects, both acute and delayed | : | First aider needs to protect himself. |

## SECTION 5. FIREFIGHTING MEASURES

| | | |
|---|---|---|
| Suitable extinguishing media | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable extinguishing media | : | No information available. |

| | | |
|---|---|---|
| Specific hazards during firefighting | : | Cool closed containers exposed to fire with water spray. |
| Hazardous combustion products | : | Carbon oxides (CO, CO2), nitrogen oxides (NOx), sulphur oxides (SOx), phosphorus oxides (POx), asphyxiants, smoke and irritating vapours as products of incomplete combustion. |
| Further information | : | Prevent fire extinguishing water from contaminating surface water or the ground water system. |

## SECTION 6. ACCIDENTAL RELEASE MEASURES

| | | |
|---|---|---|
| Personal precautions, protective equipment and emergency procedures | : | Use personal protective equipment.<br>Ensure adequate ventilation.<br>Evacuate personnel to safe areas.<br>Material can create slippery conditions. |
| Environmental precautions | : | Do not allow uncontrolled discharge of product into the environment. |
| Methods and materials for containment and cleaning up | : | Prevent further leakage or spillage if safe to do so.<br>Remove all sources of ignition.<br>Soak up with inert absorbent material.<br>Non-sparking tools should be used.<br>Ensure adequate ventilation.<br>Contact the proper local authorities. |

## SECTION 7. HANDLING AND STORAGE

| | | |
|---|---|---|
| Advice on safe handling | : | For personal protection see section 8.<br>Smoking, eating and drinking should be prohibited in the application area.<br>Use only with adequate ventilation.<br>In case of insufficient ventilation, wear suitable respiratory equipment.<br>Avoid contact with skin, eyes and clothing.<br>Do not ingest.<br>Keep away from heat and sources of ignition.<br>Keep container closed when not in use. |
| Conditions for safe storage | : | Store in original container.<br>Containers which are opened must be carefully resealed and kept upright to prevent leakage.<br>Keep in a dry, cool and well-ventilated place.<br>Keep in properly labelled containers.<br>To maintain product quality, do not store in heat or direct sunlight. |

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

**Engineering measures** : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Personal protective equipment**

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Filter type : organic vapour filter

Hand protection

Material : neoprene, nitrile, polyvinyl alcohol (PVA), Viton(R).

Remarks : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eye protection : Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Protective measures : Wash contaminated clothing before re-use.
No special protective equipment required.

Hygiene measures : Remove and wash contaminated clothing and gloves, including the inside, before re-use.
Wash face, hands and any exposed skin thoroughly after handling.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|---|---|---|
| Appearance | : | viscous liquid |
| Colour | : | amber |
| Odour | : | Mild petroleum oil like. |
| Odour Threshold | : | No data available |
| pH | : | No data available |
| Pour point | : | -51 °C (-60 °F) |
| Boiling point/boiling range | : | No data available |

| | | |
|---|---|---|
| Flash point | : | 224 °C (435 °F)<br>Method: Cleveland open cup |
| Fire Point | : | No data available |
| Auto-Ignition Temperature | : | No data available |
| Evaporation rate | : | No data available |
| Flammability | : | Low fire hazard. This material must be heated before ignition will occur. |
| Upper explosion limit | : | No data available |
| Lower explosion limit | : | No data available |
| Vapour pressure | : | No data available |
| Relative vapour density | : | No data available |
| Density | : | 0.847 kg/l (15 °C / 59 °F) |
| Solubility(ies) | | |
| Water solubility | : | insoluble |
| Partition coefficient: n-octanol/water | : | No data available |
| Viscosity | | |
| Viscosity, kinematic | : | 32.0 cSt (40 °C / 104 °F) |
| | | 6 cSt (100 °C / 212 °F) |
| Explosive properties | : | Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. |

## SECTION 10. STABILITY AND REACTIVITY

| | | |
|---|---|---|
| Possibility of hazardous reactions | : | Hazardous polymerisation does not occur.<br>Stable under normal conditions. |
| Conditions to avoid | : | No data available |
| Incompatible materials | : | Reactive with oxidising agents, acids and alkalis. |
| Hazardous decomposition products | : | May release COx, NOx, SOx, H2S, SiOx, methacrylate monomers, aldehydes, alkyl mercaptans, sulfides, asphyxiants, smoke and irritating vapours when heated to decomposition. |

## SECTION 11. TOXICOLOGICAL INFORMATION

| | | |
|---|---|---|
| Information on likely routes of exposure | : | Eye contact<br>Ingestion |

Inhalation
Skin contact

**Acute toxicity**

**Product:**

Acute oral toxicity : Remarks: No data available

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : Remarks: No data available

**Skin corrosion/irritation**

**Product:**

Remarks: No data available

**Serious eye damage/eye irritation**

**Product:**

Remarks: No data available

**Respiratory or skin sensitisation**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**STOT - single exposure**

No data available

**STOT - repeated exposure**

No data available

**Aspiration toxicity**

No data available

## SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Product:**

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other : Remarks: No data available

aquatic invertebrates

Toxicity to algae : Remarks: No data available

Toxicity to bacteria : Remarks: No data available

**Persistence and degradability**

**Product:**

Biodegradability : Remarks: No data available

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Other adverse effects**

No data available

## SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal methods**

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Offer surplus and non-recyclable solutions to a licensed disposal company.
Waste must be classified and labelled prior to recycling or disposal.
Send to a licensed waste management company.
Dispose of as hazardous waste in compliance with local and national regulations.
Dispose of product residue in accordance with the instructions of the person responsible for waste disposal.

## SECTION 14. TRANSPORT INFORMATION

**International Regulation**

**IATA-DGR**
Not regulated as a dangerous good

**IMDG-Code**
Not regulated as a dangerous good

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**49 CFR**
Not regulated as a dangerous good

**TDG**
Not regulated as a dangerous good

**Special precautions for user**

Not applicable

## SECTION 15. REGULATORY INFORMATION

**WHMIS Classification** : Not Rated

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

**The components of this product are reported in the following inventories:**

| | |
|---|---|
| **DSL** | On the inventory, or in compliance with the inventory |
| **TSCA** | All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption. |
| **IECSC** | On the inventory, or in compliance with the inventory |
| **EINECS** | On the inventory, or in compliance with the inventory |

## SECTION 16. OTHER INFORMATION

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

# WINDEX GLASS CLEANER (RTU)

| National Fire Protection Association (NFPA) | | Hazardous Material Information System (HMIS) | |
|---|---|---|---|
| | Fire Hazard: 1 | Health | 0 |
| Health: 0 | Reactivity: 0 | Fire Hazard | 1 |
| | Specific Hazard | Reactivity | 0 |

**Protective Clothing** None required.

**Emergency Overview** Clear Blue. Liquid. See Section 9.

## Section 1. Chemical Product and Company Identification

| | | | |
|---|---|---|---|
| **Product Name** | **WINDEX GLASS CLEANER (RTU)** | **Code** | 90122 & 90135 & 90139 & 90940 & 94099 |
| **Product Use** | Industrial/Institutional: Cleaning product. | **PMS#** | 455934 |
| **MSDS#** | 126011002 | **Validation Date** | 4/8/2003 |
| **U.S. Headquarters**<br>Drackett Professional<br>A Division of<br>S.C. Johnson Commercial Markets, Inc.<br>8310 16th Street<br>Sturtevant, Wisconsin 53177-0902<br>Phone: (888) 352-2249 | | **Print Date** | 4/8/2003 |
| | | **Supersedes** | 10/21/2002. |
| | | **In Case of Emergency** | (800) 851-7145 |

## Section 2. Composition and Information on Ingredients

| Ingredients | CAS # | % by Weight | Exposure Limits | LC50/LD50 |
|---|---|---|---|---|
| 2-Butoxyethanol | 111-76-2 | 0.5-1.5 | **OSHA (United States).** TWA: 120 mg/m$^3$ **ACGIH (United States).** TWA: 97 mg/m$^3$ | ORAL (LD50): Acute: 506 mg/kg [Rat]. DERMAL (LD50): Acute: 406 mg/kg [Rabbit]. VAPOR (LC50): Acute: 450 ppm 4 hour(s) [Rat]. |
| Ethylene glycol hexyl ether | 112-25-4 | 0.5-1.5 | Not available. | Not available. |
| Isopropyl Alcohol | 67-63-0 | 1-5 | **OSHA (United States).** TWA: 980 mg/m$^3$ STEL: 1225 mg/m$^3$ **ACGIH (United States).** TWA: 983 mg/m$^3$ STEL: 1230 mg/m$^3$ | ORAL (LD50): Acute: 5045 mg/kg [Rat]. DERMAL (LD50): Acute: 12800 mg/kg [Rabbit]. VAPOR (LC50): Acute: 16000 ppm 8 hour(s) [Rat]. |
| Water | 7732-18-5 | 60-100 | Not available. | Not available. |

## Section 3. Hazards Identification

**Routes of Entry** Inhalation. Skin contact. Eye contact.

**Potential Acute Health Effects**

***Eyes*** None known.

***Skin*** None known.

***Inhalation*** None known.

***Ingestion*** None known.

**Medical Conditions Aggravated by Overexposure:** None known.

**See Toxicological Information (section 11)**

***Continued on Next Page***

# WINDEX GLASS CLEANER (RTU)

## Section 4. First Aid Measures

| | |
|---|---|
| **Eye Contact** | Rinse with plenty of running water. |
| **Skin Contact** | Rinse with plenty of running water. |
| **Inhalation** | No specific first aid measures are required. |
| **Ingestion** | No specific first aid measures are required. |

## Section 5. Fire Fighting Measures

| | |
|---|---|
| **Flammability of the Product** | Although this product has a flash point below 200 Deg. F, it is an aqueous solution containing an alcohol and does not sustain combustion. |
| **Flash Points** | Closed cup: 51.1°C (124°F). |
| **Products of Combustion** | None known. |
| **Fire Fighting Media and Instructions** | Extinguish with water spray or carbon dioxide, dry chemical powder or appropriate foam. Normal fire fighting procedure may be used. |
| **Special Remarks on Fire and Explosion Hazards** | None known. |

## Section 6. Accidental Release Measures

| | |
|---|---|
| **Personal Precautions** | Put on appropriate personal protective equipment (see Section 8.). |
| **Environmental Precautions and Clean-up Methods** | In the event of major spillage: Use appropriate containment to avoid environmental contamination. Sweep or scrape up material. Place in suitable clean, dry containers for disposal by approved methods. Use a water rinse for final clean-up. |

## Section 7. Handling and Storage

| | |
|---|---|
| **Handling** | Avoid contact with eyes. Use appropriate hygiene measures when handling product. FOR INDUSTRIAL USE ONLY |
| **Storage** | Store in a dry, cool and well-ventilated area. Protect from freezing. KEEP OUT OF REACH OF CHILDREN. |

## Section 8. Exposure Controls/Personal Protection

| | |
|---|---|
| **Engineering Controls** | No special ventilation requirements. General room ventilation is adequate. |
| **Personal Protection** | |
| ***Eyes*** | No special requirements under normal use conditions. |
| ***Hands*** | No special requirements under normal use conditions. |
| ***Respiratory*** | No special requirements under normal use conditions. |
| ***Feet*** | No special requirements under normal use conditions. |
| ***Body*** | No special protective clothing is required. |

## Section 9. Physical and Chemical Properties

| | |
|---|---|
| **Physical State and Appearance** | Liquid. |
| **Odor** | Mild. Ammoniacal. |
| **Color** | Clear Blue. |
| **pH** | 10.6 to 11.5 [Basic.] |
| **Specific Gravity** | 1 |
| **Solubility in water** | Complete. |

***Continued on Next Page***

# WINDEX GLASS CLEANER (RTU)

## Section 10. Stability and Reactivity

| | |
|---|---|
| **Stability and Reactivity** | The product is stable. |
| **Conditions of Instability** | None known. |
| **Incompatibility with Various Substances** | Not available. |
| **Hazardous Decomposition Products** | When exposed to fire: Produces normal products of combustion. |
| **Hazardous Polymerization** | Will not occur. |

## Section 11. Toxicological Information

| | |
|---|---|
| **Acute toxicity** | ORAL (LD50) Estimated to be greater than 5000 mg/kg (rat). |
| **Effects of Chronic Exposure** | None known. |
| **Other Toxic Effects** | Not available. |

## Section 12. Ecological Information

**Not available.**

## Section 13. Disposal Considerations

| | |
|---|---|
| **Waste Information** | No special precautions. Dispose of according to all federal, state and local regulations. |

## Section 14. Transport Information

**DOT Classification**

| | |
|---|---|
| **DOT Proper Shipping Name** | - Please refer to the Bill of Lading/receiving documents for up to date shipping information. |

**TDG Classification**

| | |
|---|---|
| **TDG Proper Shipping Name** | - Please refer to the Bill of Lading/receiving documents for up to date shipping information. |

## Section 15. Regulatory Information

**Reporting in this section is based on ingredients disclosed in Section 2**

**US Regulations**

**Federal** SARA 313 toxic chemical notification and release reporting: Isopropyl Alcohol
CERCLA: Hazardous substances.: Isopropyl Alcohol

**State** New Jersey spill list: Isopropyl Alcohol
New Jersey: Isopropyl Alcohol
Massachusetts spill list: Isopropyl Alcohol
Massachusetts RTK: Isopropyl Alcohol
Pennsylvania RTK: Isopropyl Alcohol

This product is not subject to the reporting requirements under California's Proposition 65.

**Registered Product Information** Not applicable.

**Canadian Regulations**

**WHMIS Classification** Not controlled under WHMIS (Canada).

**WHMIS Icon**

**Registered Product Information** Not applicable.

**Chemical Inventory Status** All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory

*Continued on Next Page*

# WINDEX GLASS CLEANER (RTU)

## *Section 16. Other Information*

| | |
|---|---|
| **Other Special Considerations** | MSDS Serial Range: 2-3 |
| **Version** | 2.1 |

**Notice to Reader**

***This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained within. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.***

Conforms to USDOL OSHA 29CFR 1910.1200 HAZCOM

# SAFETY DATA SHEET

Lysol Brand Disinfectant Concentrate

HEALTH • HYGIENE • HOME

## 1. Product and company identification

**Product name** : Lysol Brand Disinfectant Concentrate

**Distributed by** : Reckitt Benckiser LLC.
Morris Corporate Center IV
399 Interpace Parkway (P.O. Box 225)
Parsippany, New Jersey 07054-0225
+1 973 404 2600

**Emergency telephone number (Medical)** : 1-800-338-6167

**Emergency telephone number (Transport)** : 1-800-424-9300 (U.S. & Canada) CHEMTREC
Outside U.S. and Canada (North America), call Chemtrec:703-527-3887

**Website:** **http://www.rbnainfo.com**

**Product use** : Disinfectant.

**This SDS is designed for workplace employees, emergency personnel and for other conditions and situations where there is greater potential for large-scale or prolonged exposure, in accordance with the requirements of USDOL Occupational Safety and Health Administration.**

**This SDS is not applicable for consumer use of our products. For consumer use, all precautionary and first aid language is provided on the product label in accordance with the applicable government regulations, and shown in Section 15 of this SDS.**

**SDS #** : 353773PSDS v3.0

**Formulation #:** : 269-005 (353773 v10.0)

**EPA ID No.** : 777-94

**UPC Code / Sizes** : 19200-02201-10; 19200-77500-10 (12 fl.oz. PET Amber Pour Bottle with CRC cap)

## 2. Hazards identification

**Classification of the substance or mixture** : FLAMMABLE LIQUIDS - Category 4
SKIN CORROSION/IRRITATION - Category 1C
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

**GHS label elements**

**Hazard pictograms** :

**Signal word** : Danger

**Hazard statements** : Combustible liquid.
Causes severe skin burns and eye damage.

**Precautionary statements**

# 2. Hazards identification

**General** : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

**Prevention** : Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from flames and hot surfaces. - No smoking. Wash hands thoroughly after handling.

**Response** : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

**Storage** : Store locked up. Store in a well-ventilated place. Keep cool.

**Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Supplemental label elements** : None known.

**Hazards not otherwise classified** : None known.

# 3. Composition/information on ingredients

**Substance/mixture** : Mixture

| Ingredient name | % | CAS number |
|---|---|---|
| clorofene | 5 - 10 | 120-32-1 |
| potassium hydroxide | 2.5 - 5 | 1310-58-3 |
| Ethyl alcohol | 1 - 2.5 | 64-17-5 |
| Isopropyl alcohol | 1 - 2.5 | 67-63-0 |

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.**

# 4. First aid measures

**Description of necessary first aid measures**

**Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

**Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

# 4. First aid measures

**Skin contact** : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

**Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

## Most important symptoms/effects, acute and delayed

### Potential acute health effects

**Eye contact** : Causes serious eye damage.

**Inhalation** : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.

**Skin contact** : Causes severe burns.

**Ingestion** : May cause burns to mouth, throat and stomach.

### Over-exposure signs/symptoms

**Eye contact** : Adverse symptoms may include the following:
pain
watering
redness

**Inhalation** : No specific data.

**Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

**Ingestion** : Adverse symptoms may include the following:
stomach pains

## Indication of immediate medical attention and special treatment needed, if necessary

**Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments** : No specific treatment.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

**See toxicological information (Section 11)**

# 5. Fire-fighting measures

## Extinguishing media

**Suitable extinguishing media** : Use dry chemical, $CO_2$, water spray (fog) or foam.

**Unsuitable extinguishing media** : Do not use water jet.

**Specific hazards arising from the chemical** : Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

**Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
halogenated compounds
metal oxide/oxides

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

# 6. Accidental release measures

## Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

## Methods and materials for containment and cleaning up

**Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

# 6. Accidental release measures

**Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

# 7. Handling and storage

## Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

# 8. Exposure controls/personal protection

## Control

### Occupational exposure limits

| Ingredient name | Exposure limits |
|---|---|
| potassium hydroxide | **ACGIH TLV (United States, 6/2013).**<br>C: 2 mg/m³<br>**OSHA PEL 1989 (United States, 3/1989).**<br>CEIL: 2 mg/m³<br>**NIOSH REL (United States, 10/2013).**<br>TWA: 2 mg/m³ 10 hours. |
| Ethyl alcohol | **ACGIH TLV (United States, 6/2013).**<br>STEL: 1000 ppm 15 minutes.<br>**OSHA PEL 1989 (United States, 3/1989).**<br>TWA: 1000 ppm 8 hours.<br>TWA: 1900 mg/m³ 8 hours.<br>**NIOSH REL (United States, 10/2013).**<br>TWA: 1000 ppm 10 hours.<br>TWA: 1900 mg/m³ 10 hours.<br>**OSHA PEL (United States, 2/2013).** |

# 8. Exposure controls/personal protection

| | |
|---|---|
| | TWA: 1000 ppm 8 hours.<br>TWA: 1900 mg/m³ 8 hours. |
| Isopropyl alcohol | **ACGIH TLV (United States, 6/2013).**<br>TWA: 200 ppm 8 hours.<br>STEL: 400 ppm 15 minutes.<br>**OSHA PEL 1989 (United States, 3/1989).**<br>TWA: 400 ppm 8 hours.<br>TWA: 980 mg/m³ 8 hours.<br>STEL: 500 ppm 15 minutes.<br>STEL: 1225 mg/m³ 15 minutes.<br>**NIOSH REL (United States, 10/2013).**<br>TWA: 400 ppm 10 hours.<br>TWA: 980 mg/m³ 10 hours.<br>STEL: 500 ppm 15 minutes.<br>STEL: 1225 mg/m³ 15 minutes.<br>**OSHA PEL (United States, 2/2013).**<br>TWA: 400 ppm 8 hours.<br>TWA: 980 mg/m³ 8 hours. |

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Individual protection measures**

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

**Skin protection**

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

## 8. Exposure controls/personal protection

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## 9. Physical and chemical properties

**Appearance**

**Physical state** : Liquid. [Clear.]

**Color** : Red.

**Odor** : soap

**Odor threshold** : Not available.

**pH** : 10.3 to 11.1 [Conc. (% w/w): 100%]

**Melting point** : Not available.

**Boiling point** : Not available.

**Flash point** : Closed cup: 62.8°C (145°F)

**Evaporation rate** : Not available.

**Flammability (solid, gas)** : Not available.

**Lower and upper explosive (flammable) limits** : Not available.

**Vapor pressure** : Not available.

**Vapor density** : Not available.

**Relative density** : 1.024 to 1.034

**Solubility** : Easily soluble in the following materials: cold water and hot water.

**Partition coefficient: n-octanol/water** : Not available.

**Auto-ignition temperature** : Not available.

**Decomposition temperature** : Not available.

**Viscosity** : Not available.

## 10. Stability and reactivity

**Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**Chemical stability** : The product is stable.

**Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

**Incompatible materials** : Reactive or incompatible with the following materials:
oxidizing materials

**Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

# 11. Toxicological information

## Information on toxicological effects

### Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|---|---|---|---|---|
| clorofene | LD50 Oral | Rat | 1700 mg/kg | - |
| Ethyl alcohol | LC50 Inhalation Vapor | Rat | 124700 mg/m³ | 4 hours |
| | LD50 Oral | Rat | 7 g/kg | - |
| Isopropyl alcohol | LD50 Dermal | Rabbit | 12800 mg/kg | - |
| | LD50 Oral | Rat | 5000 mg/kg | - |
| *Lysol Brand Disinfectant Concentrate, Original Scent | LC50 Inhalation Vapor | Rat | >2.07 mg/l | 4 hours |
| | LD50 Dermal | Rabbit | >5000 mg/kg | - |
| | LD50 Oral | Rat | 5000 mg/kg | - |

**Conclusion/Summary** : Not classified Harmful. *Information is based on toxicity test result of a similar product.

### Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---|---|---|---|---|---|
| clorofene | Skin - Mild irritant | Human | - | 48 hours 1 Percent | - |
| potassium hydroxide | Eyes - Moderate irritant | Rabbit | - | 24 hours 1 milligrams | - |
| | Skin - Severe irritant | Guinea pig | - | 24 hours 50 milligrams | - |
| | Skin - Severe irritant | Human | - | 24 hours 50 milligrams | - |
| | Skin - Severe irritant | Rabbit | - | 24 hours 50 milligrams | - |
| Ethyl alcohol | Eyes - Moderate irritant | Rabbit | - | 0.066666667 minutes 100 milligrams | - |
| | Eyes - Mild irritant | Rabbit | - | 24 hours 500 milligrams | - |
| | Eyes - Moderate irritant | Rabbit | - | 100 microliters | - |
| | Eyes - Severe irritant | Rabbit | - | 500 milligrams | - |
| | Skin - Mild irritant | Rabbit | - | 400 milligrams | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 20 milligrams | - |
| Isopropyl alcohol | Eyes - Moderate irritant | Rabbit | - | 24 hours 100 milligrams | - |
| | Eyes - Moderate irritant | Rabbit | - | 10 milligrams | - |
| | Eyes - Severe irritant | Rabbit | - | 100 milligrams | - |
| | Skin - Mild irritant | Rabbit | - | 500 milligrams | - |
| *Lysol Brand Disinfectant Concentrate, Original Scent | Skin - Visible necrosis | Rabbit | - | 240 minutes | 14 days |
| | Eyes - Cornea opacity | Rabbit | >3 | - | - |

### Conclusion/Summary

**Skin** : Causes burns. *Information is based on toxicity test result of a similar product.

**Eyes** : Causes irreversible eye damage *Information is based on toxicity test result of a similar product.

### Sensitization

# 11. Toxicological information

| Product/ingredient name | Route of exposure | Species | Result |
|---|---|---|---|
| *Lysol Brand Disinfectant Concentrate, Original Scent | skin | Guinea pig | Not sensitizing |

**Conclusion/Summary**

**Skin** : Non-sensitizer to skin. *Information is based on toxicity test result of a similar product.

**Mutagenicity**

Not available.

**Carcinogenicity**

Not available.

**Classification**

| Product/ingredient name | OSHA | IARC | NTP |
|---|---|---|---|
| Ethyl alcohol | - | 1 | - |
| Isopropyl alcohol | - | 3 | - |

**Reproductive toxicity**

Not available.

**Teratogenicity**

Not available.

**Specific target organ toxicity (single exposure)**

| Name | Category | Route of exposure | Target organs |
|---|---|---|---|
| Isopropyl alcohol | Category 3 | Not applicable. | Narcotic effects |

**Specific target organ toxicity (repeated exposure)**

Not available.

**Aspiration hazard**

Not available.

**Information on the likely routes of exposure** : Not available.

**Potential acute health effects**

**Eye contact** : Causes serious eye damage.

**Inhalation** : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.

**Skin contact** : Causes severe burns.

**Ingestion** : May cause burns to mouth, throat and stomach.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Eye contact** : Adverse symptoms may include the following:
pain
watering
redness

# 11. Toxicological information

**Inhalation** : No specific data.

**Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

**Ingestion** : Adverse symptoms may include the following:
stomach pains

## Delayed and immediate effects and also chronic effects from short and long term exposure

### Short term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Long term exposure

**Potential immediate effects** : Not available.

**Potential delayed effects** : Not available.

### Potential chronic health effects

Not available.

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : No known significant effects or critical hazards.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

## Numerical measures of toxicity

### Acute toxicity estimates

Not available.

# 12. Ecological information

### Toxicity

| Product/ingredient name | Result | Species | Exposure |
|---|---|---|---|
| clorofene | Acute EC50 0.59 ppm Fresh water | Daphnia - Daphnia magna | 48 hours |
| | Acute LC50 0.33 ppm Fresh water | Fish - Lepomis macrochirus | 96 hours |
| potassium hydroxide | Acute LC50 80 ppm Fresh water | Fish - Gambusia affinis - Adult | 96 hours |
| Ethyl alcohol | Acute EC50 17.921 mg/l Marine water | Algae - Ulva pertusa | 96 hours |
| | Acute EC50 2000 µg/l Fresh water | Daphnia - Daphnia magna | 48 hours |
| | Acute LC50 25500 µg/l Marine water | Crustaceans - Artemia franciscana - Larvae | 48 hours |
| | Acute LC50 42000 µg/l Fresh water | Fish - Oncorhynchus mykiss | 4 days |
| | Chronic NOEC 4.995 mg/l Marine water | Algae - Ulva pertusa | 96 hours |
| | Chronic NOEC 0.375 ul/L Fresh water | Fish - Gambusia holbrooki - | 12 weeks |

# 12. Ecological information

| | | | |
|---|---|---|---|
| Isopropyl alcohol | Acute LC50 1400000 µg/l Marine water<br>Acute LC50 4200 mg/l Fresh water | Larvae<br>Crustaceans - Crangon crangon<br>Fish - Rasbora heteromorpha | 48 hours<br>96 hours |

## Persistence and degradability

Not available.

## Bioaccumulative potential

| Product/ingredient name | $LogP_{ow}$ | BCF | Potential |
|---|---|---|---|
| clorofene | 3.6 | - | low |
| Ethyl alcohol | -0.35 | - | low |
| Isopropyl alcohol | 0.05 | - | low |

## Mobility in soil

**Soil/water partition coefficient ($K_{OC}$)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

# 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

# 14. Transport information

| Regulatory information | UN number | Proper shipping name | Classes | PG* | Label | Additional information |
|---|---|---|---|---|---|---|
| | | | | | | |

# 14. Transport information

| | | | | | | |
|---|---|---|---|---|---|---|
| **DOT Classification** | UN1760 | Corrosive liquids, n.o.s. (potassium hydroxide, 2,4-xylenol) RQ (potassium hydroxide, 2,4-xylenol) | 8 | II |   | **Reportable quantity** 25990.9 lbs / 11799.9 kg [3029.3 gal / 11467.3 L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.<br><br>**Limited quantity** Yes.<br><br>**Packaging instruction**<br>**Passenger aircraft** Quantity limitation: 1 L<br><br>**Cargo aircraft** Quantity limitation: 30 L<br><br>**Special provisions** B2, IB2, T11, TP2, TP27 |
| **TDG Classification** | UN1760 | CORROSIVE LIQUID, N.O.S. (potassium hydroxide, 2,4-xylenol) | 8 | II |   | **Explosive Limit and Limited Quantity Index** 1<br><br>**Passenger Carrying Road or Rail Index** 1<br><br>**Special provisions** 16 |
| **Mexico Classification** | UN1760 | LIQUIDO CORROSIVO, N.E.P. (potassium hydroxide, 2,4-xylenol) | 8 | II |   | **Special provisions** 274 |
| **IMDG Class** | UN1760 | CORROSIVE LIQUID, N.O.S. (potassium hydroxide, 2,4-xylenol) | 8 | II |   | **Emergency schedules (EmS)** F-A, S-B<br><br>**Special provisions** 274 |
| | | | | | | |

# 14. Transport information

| | | | | | | |
|---|---|---|---|---|---|---|
| **IATA-DGR Class** | UN1760 | Corrosive liquid, n.o.s. (potassium hydroxide, 2,4-xylenol) | 8 | II |  | **Passenger and Cargo Aircraft**<br>Quantity limitation: 1 L<br>Packaging instructions: 851<br>**Cargo Aircraft Only**<br>Quantity limitation: 30 L<br>Packaging instructions: 855<br>**Limited Quantities - Passenger Aircraft**<br>Quantity limitation: 0.5 L<br>Packaging instructions: Y840<br><br>**Special provisions**<br>A3, A803 |

PG* : Packing group

# 15. Regulatory information

**U.S. Federal regulations** : **TSCA 8(a) PAIR**: 2-methylpropan-2-ol

**TSCA 8(a) CDR Exempt/Partial exemption**: Not determined

**United States inventory (TSCA 8b)**: Not determined.

**Clean Water Act (CWA) 307**: clorofene; 2,4-xylenol

**Clean Water Act (CWA) 311**: potassium hydroxide; sodium hydroxide; ammonia, anhydrous; xylenol; m-cresol; p-cresol

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Not listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

**SARA 302/304**

**Composition/information on ingredients**

| Name | % | EHS | SARA 302 TPQ | | SARA 304 RQ | |
|---|---|---|---|---|---|---|
| | | | (lbs) | (gallons) | (lbs) | (gallons) |
| Ammonia | < 0.01 | Yes. | 500 | - | 100 | - |

**SARA 304 RQ** : 100000000 lbs / 45400000 kg [11655404.4 gal / 44120505.3 L]

# 15. Regulatory information

## SARA 311/312

**Classification** : Fire hazard
Immediate (acute) health hazard

### Composition/information on ingredients

| Name | % | Fire hazard | Sudden release of pressure | Reactive | Immediate (acute) health hazard | Delayed (chronic) health hazard |
|---|---|---|---|---|---|---|
| clorofene | 5 - 10 | No. | No. | No. | Yes. | No. |
| potassium hydroxide | 2.5 - 5 | No. | No. | No. | Yes. | No. |
| Ethyl alcohol | 1 - 2.5 | Yes. | No. | No. | Yes. | No. |
| Isopropyl alcohol | 1 - 2.5 | Yes. | No. | No. | Yes. | No. |

## SARA 313

| | Product name | CAS number | % |
|---|---|---|---|
| **Form R - Reporting requirements** | clorofene<br>Isopropyl alcohol | 120-32-1<br>67-63-0 | 5.4998<br>1.8333 |
| **Supplier notification** | clorofene<br>Isopropyl alcohol | 120-32-1<br>67-63-0 | 5.4998<br>1.8333 |

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

## State regulations

**Massachusetts** : The following components are listed: POTASSIUM HYDROXIDE; ISOPROPYL ALCOHOL; ETHYL ALCOHOL

**New York** : The following components are listed: Potassium hydroxide

**New Jersey** : The following components are listed: POTASSIUM HYDROXIDE; CAUSTIC POTASH; ISOPROPYL ALCOHOL; 2-PROPANOL; ETHYL ALCOHOL; ALCOHOL

**Pennsylvania** : The following components are listed: POTASSIUM HYDROXIDE (K(OH)); CHLORINATED PHENOLS; 2-PROPANOL; DENATURED ALCOHOL

## Label elements

**Signal word:** : DANGER

**Hazard statements** : Harmful if swallowed.

Corrosive Causes irreversible eye damage

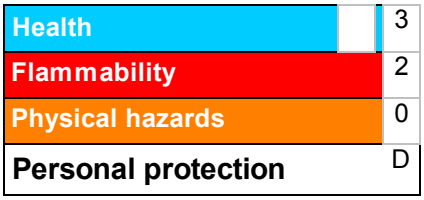
Corrosive CAUSES SKIN BURNS.

**Precautionary measures** : Keep out of reach of children.
Do not get in eyes, on skin, or on clothing.
Avoid breathing vapor or mist.
Wear protective gloves/protective clothing/eye protection/face protection.
Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.
Remove contaminated clothing and wash it before reuse.

Avoid breathing dust/fume/gas/mist/vapors/spray.

# 16. Other information

**Hazardous Material Information System (U.S.A.)** :




**Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.**

**The customer is responsible for determining the PPE code for this material.**

**National Fire Protection Association (U.S.A.)** :


**Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.**

**Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.**

**Key to abbreviations** : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

**Date of issue** : 01/04/2015.

**Date of previous issue** : 09/04/2010.

**Version** : 3

# 16. Other information

**Prepared by** : Reckitt Benckiser LLC.
Product Safety Department
1 Philips Parkway
Montvale, New Jersey 07646-1810 USA.
FAX: 201-476-7770

**Revision comments** : Update as per US GHS.

**Indicates information that has changed from previously issued version.**

**Notice to reader**

**To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.**
**Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.**

RB is a member of the CSPA Product Care Product Stewardship Program.

# SAFETY DATA SHEET

**Revision Date** 04-Sep-2015 **Version** 3

## 1. IDENTIFICATION

**Product identifier**
**Product Name** Spray Nine® 32 fl.oz

**Other means of identification**
**Product Code** 26810
**Synonyms** None

**Recommended use of the chemical and restrictions on use**
**Recommended Use** Cleaner
**Uses advised against** No information available

**Details of the supplier of the safety data sheet**

**Manufacturer Address**
ITW Permatex
6875 Parkland Blvd.
Solon, OH 44139 USA

**Distributor**
ITW Permatex Canada
35 Brownridge Road, Unit 1
Halton Hills, ON Canada L7G 0C6
Telephone: (800) 924-6994

**Company Phone Number** 1-87-Permatex
(877) 376-2839

**24 Hour Emergency Phone Number** Chem-Tel: 800-255-3924
International Emergency:
00+1+ 813-248-0585
Contract Number: MIS0003453

**E-mail address** mail@permatex.com

## 2. HAZARDS IDENTIFICATION

**Classification**

**OSHA Regulatory Status**
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

**Label elements**

**Emergency Overview**

The product contains no substances which at their given concentration, are considered to be hazardous to health

**Appearance** Clear **Physical state** Liquid **Odor** Citrus

**Precautionary Statements - Storage**
Store in a well-ventilated place. Keep container tightly closed

**Precautionary Statements - Disposal**
Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**
Not applicable

**Other Information**
- Not applicable

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**substance(s)**

| Chemical Name | CAS No | Weight-% | Trade Secret |
|---|---|---|---|
| WATER | 7732-18-5 | 60 - 100 | * |
| ETHOXYLATED C9-C11 ALCOHOLS | 68439-46-3 | 1 - 5 | * |
| DIPROPYLENE GLYCOL MONONBUTYL ETHER | 29911-28-2 | 1 - 5 | * |

*The exact percentage (concentration) of composition has been withheld as a trade secret.

## 4. FIRST AID MEASURES

**Description of first aid measures**

**General advice** Get medical advice/attention if you feel unwell.

**Eye contact** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**Skin contact** IF ON SKIN:. Wash skin with soap and water. If skin irritation persists, call a physician. Wash contaminated clothing before reuse.

**Inhalation** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, call a physician.

**Ingestion** IF SWALLOWED:. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician.

**Self-protection of the first aider** Use personal protective equipment as required.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** See section 2 for more information.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media**
Carbon dioxide (CO2), Dry chemical, Foam

**Unsuitable extinguishing media**
None.

**Specific hazards arising from the chemical**
None in particular.

**Explosion data**
**Sensitivity to Mechanical Impact** None.
**Sensitivity to Static Discharge** None.

**Protective equipment and precautions for firefighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Avoid contact with eyes and skin. Wash thoroughly after handling.

**Environmental precautions**

**Environmental precautions** Do not flush into surface water or sanitary sewer system. See Section 12 for additional ecological Information.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Ensure adequate ventilation. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

**Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin and eyes.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep from freezing.

**Incompatible materials** Strong oxidizing agents

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

**Exposure Guidelines** .
*NIOSH IDLH Immediately Dangerous to Life or Health*

**Other Information** Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

**Appropriate engineering controls**

**Engineering Controls** Eyewash stations

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Tight sealing safety goggles.

**Skin and body protection** Wear protective natural rubber, nitrile rubber, Neoprene™ or PVC gloves.

**Respiratory protection** Use NIOSH-approved air-purifying respirator with organic vapor cartridge or canister, as appropriate.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice. Regular cleaning of

equipment, work area and clothing is recommended.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

| | |
|---|---|
| **Physical state** | Liquid |
| **Appearance** | Clear |
| **Odor** | Citrus |
| **Odor threshold** | No information available |

| **Property** | **Values** | **Remarks • Method** |
|---|---|---|
| **pH** | No information available | |
| **Melting point / freezing point** | No information available | |
| **Boiling point / boiling range** | 100 °C / 212 °F | |
| **Flash point** | > 93 °C / > 200 °F | Tag Closed Cup |
| **Evaporation rate** | < 1 | Butyl acetate = 1 |
| **Flammability (solid, gas)** | No information available | |
| **Flammability Limit in Air** | | |
| **Upper flammability limit:** | No information available | |
| **Lower flammability limit:** | No information available | |
| **Vapor pressure** | 18 mm Hg | |
| **Vapor density** | >1 | Air = 1 |
| **Relative density** | 1.02 g/ml | |
| **Water solubility** | Soluble in water | |
| **Solubility in other solvents** | No information available | |
| **Partition coefficient** | No information available | |
| **Autoignition temperature** | No information available | |
| **Decomposition temperature** | No information available | |
| **Kinematic viscosity** | No information available | |
| **Dynamic viscosity** | No information available | |
| **Explosive properties** | No information available | |
| **Oxidizing properties** | No information available | |

**Other Information**

| | |
|---|---|
| **Softening point** | No information available |
| **Molecular weight** | No information available |
| **VOC Content (%)** | <0.5% |
| **Density** | No information available |
| **Bulk density** | No information available |

## 10. STABILITY AND REACTIVITY

**Reactivity**
No data available

**Chemical stability**
Stable under recommended storage conditions

**Possibility of Hazardous Reactions**
None under normal processing.

**Conditions to avoid**
Keep from freezing.

**Incompatible materials**
Strong oxidizing agents

**Hazardous Decomposition Products**
Carbon oxides

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

**Inhalation** May cause irritation of respiratory tract.

**Eye contact** Contact with eyes may cause irritation. May cause redness and tearing of the eyes.

**Skin contact** May cause skin irritation and/or dermatitis.

**Ingestion** Ingestion may cause irritation to mucous membranes.

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|---|---|---|
| WATER<br>7732-18-5 | > 90 mL/kg ( Rat ) | - | - |
| ETHOXYLATED C9-C11 ALCOHOLS<br>68439-46-3 | = 1378 mg/kg ( Rat ) = 1400 mg/kg ( Rat ) | > 2 g/kg ( Rabbit ) | - |
| DIPROPYLENE GLYCOL MONONBUTYL ETHER<br>29911-28-2 | = 1620 µL/kg ( Rat ) | = 5860 µL/kg ( Rabbit ) | = 42.1 ppm ( Rat ) 4 h |

**Information on toxicological effects**

**Symptoms** No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Sensitization** No information available.
**Germ cell mutagenicity** No information available.
**Carcinogenicity** This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B).

**The following values are calculated based on chapter 3.1 of the GHS document** .
**ATEmix (oral)** 39421 mg/kg
**ATEmix (dermal)** 76980 mg/kg

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

3.17 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

| Chemical Name | Algae/aquatic plants | Fish | Crustacea |
|---|---|---|---|
| DIPROPYLENE GLYCOL MONONBUTYL ETHER<br>29911-28-2 | - | 841: 96 h Poecilia reticulata mg/L LC50 static | - |

**Persistence and degradability**
No information available.

**Bioaccumulation**
No information available.

**Mobility**
No information available.

**Other adverse effects**
No information available

## 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods**

| | |
|---|---|
| **Disposal of wastes** | Disposal should be in accordance with applicable regional, national and local laws and regulations. |
| **Contaminated packaging** | Do not reuse container. |
| **US EPA Waste Number** | Not applicable |

## 14. TRANSPORT INFORMATION

**DOT**
**Proper shipping name:** Not regulated

**IATA**
**Proper shipping name:** Not regulated

**IMDG**
**Proper shipping name:** Not regulated

## 15. REGULATORY INFORMATION

**International Inventories**

| | |
|---|---|
| **TSCA** | Complies |
| **DSL/NDSL** | Complies |
| **EINECS/ELINCS** | Not determined |
| **ENCS** | Not determined |
| **IECSC** | Complies |
| **KECL** | Not determined |
| **PICCS** | Not determined |
| **AICS** | Not determined |

**Legend:**
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
**ENCS** - Japan Existing and New Chemical Substances
**IECSC** - China Inventory of Existing Chemical Substances
**KECL** - Korean Existing and Evaluated Chemical Substances
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances
**AICS** - Australian Inventory of Chemical Substances

**US Federal Regulations**

**SARA 313**
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**

| | |
|---|---|
| **Acute health hazard** | Yes |
| **Chronic Health Hazard** | No |
| **Fire hazard** | No |
| **Sudden release of pressure hazard** | No |
| **Reactive Hazard** | No |

**CWA (Clean Water Act)**
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**CERCLA**
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

## US State Regulations

**California Proposition 65**
This product contains the following Proposition 65 chemicals

| Chemical Name | California Proposition 65 |
|---|---|
| ETHANOL - 64-17-5 | Carcinogen<br>Developmental |

**U.S. State Right-to-Know Regulations**

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|---|---|---|---|
| SODIUM HYDROXIDE<br>1310-73-2 | X | X | X |
| ETHANOL<br>64-17-5 | X | X | X |

**U.S. EPA Label Information**
**EPA Pesticide Registration Number** 6659-3
**EPA Statement**
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals.

**WHMIS Hazard Class**
Non-controlled

## 16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

| | | | | |
|---|---|---|---|---|
| **NFPA** | **Health hazards** 1 | **Flammability** 1 | **Instability** 0 | - |
| **HMIS** | **Health hazards** 1 | **Flammability** 1 | **Physical hazards** 0 | **Personal protection** B |

NFPA (National Fire Protection Association)
HMIS (Hazardous Material Information System)

**Revision Date** 04-Sep-2015

**Disclaimer**
**The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.**

**End of Safety Data Sheet**

# Safety Data Sheet

**The Armor All/STP Products Company**
44 Old Ridgebury Road
Suite 300
Danbury, CT 06810
Tel. 1-203-205-2900

## 1. Product And Company Identification

**Product Name:** ARMOR ALL® Car Wash

**Responsible Party:** The Armor All/STP Products Company
44 Old Ridgebury Road
Suite 300
Danbury, CT 06810

**Information Phone Number:** +1 203-205-2900
**Emergency Phone Number:**
For Medical Emergencies, call 1-866-949-6465 / +1 303-389-1332 (Outside US and Canada)
For Transportation Emergencies, call 1-800-424-9300 (Chemtrec) +1-703-527-3887 for Outside US and Canada (call collect)
**SDS Date Of Preparation:** 09/11/2014
**Product Use and Uses Advised Against**: Automotive maintenance product – For consumer and professional use

## 2. Hazards Identification

Note: This product is a consumer product and is labeled in accordance with the Consumer Product Safety Commission regulations and not OSHA regulations. The requirements for the labeling of consumer products take precedence over OSHA labeling so the actual product label may differ from what is shown below.

**GHS Classification:**

| **Physical:** | **Health:** |
|---|---|
| Not Hazardous | Not Hazardous |

**GHS Label Elements:** None

## 3. Composition/Information On Ingredients

| **Component** | **CAS No.** | **Amount** |
|---|---|---|
| Non-Hazardous Ingredients | Mixture | 100% |

## 4. First Aid Measures

**Inhalation:** If symptoms of exposure develop, remove to fresh air. Seek medical attention if symptoms persist.

**Skin Contact:** If skin irritation or redness develops, seek medical attention.

**Eye Contact:** Flush eyes with large amounts of water. If irritation or other symptoms persist, seek medical attention.

**Ingestion:** If the victim is fully conscious, have them rinse their mouth with water. Get medical assistance by calling a doctor or poison center. Never give anything by mouth to a person who is unconscious or drowsy.

**Most Important Symptoms:** Direct eye contact may cause mild irritation.

The Armor All/STP Products Company
44 Old Ridgebury Road
Suite 300
Danbury, CT 06810
Tel. 1-203-205-2900

**Indication of Immediate Medical Attention/Special Treatment:** Immediate medical attention should not be required.

## 5. Firefighting Measures

**Suitable (and Unsuitable) Extinguishing Media:** Use any media that is suitable for the surrounding fire. Cool fire exposed containers with water.

**Specific Hazards Arising from the Chemical:** Closed containers may rupture if exposed to extreme heat. Combustion may release oxides of sulfur and carbon.

**Special Protective Equipment and Precautions for Fire-fighters**: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored

## 6: Accidental Release Measures

**Personal Precautions, Protective Equipment, and Emergency Procedures:** Wear appropriate protective equipment.

**Environmental Precautions:** Prevent entry in storm sewers and waterways. Report spill as required by local and national regulations.

**Methods for Containment and Clean-Up:** Absorb with an inert material. Collect into a suitable container for disposal. Rinse area with water.

## 7. Handling and Storage

**Precautions for Safe Handling**: Avoid contact with eyes, skin and clothing. Rinse exposed skin with water after use. Keep out of the reach of children.

**Conditions for Safe Storage, Including any Incompatibilities:** No special storage required.

## 8. Exposure Controls / Personal Protection

**Exposure Guidelines:**

| CHEMICAL | EXPOSURE LIMIT |
|---|---|
| Non-Hazardous Ingredients | None Established |

**Engineering Controls:** General ventilation should be adequate for all normal use.

**Personal Protective Equipment**

**Respiratory Protection:** None required under normal use conditions.

**Gloves:** None normally required. Avoid prolonged skin contact. Impervious gloves such as rubber, neoprene or nitrile can be used if needed to avoid prolonged or repeated skin contact.

**Eye Protection:** None required for normal use. Avoid eye contact.

**Other Protective Equipment/Clothing:** None required under normal use conditions.

## 9. Physical and Chemical Properties

**Appearance And Odor:** Clear blue liquid with a characteristic odor.

| | |
|---|---|
| **Physical State:** Liquid | **Odor Threshold:** Not available |
| **pH:** 6-8 | **Specific Gravity:** 1.009 @ 25°C |
| **Boiling Point:** Not determined | **Vapor Pressure:** Not determined |
| **Melting/Freezing Point**: Not determined | **Vapor Density:** Not determined |
| **Solubility In Water**: Not determined | **Percent Volatile:** >90% |
| **Viscosity:** 200 – 800 cP @ 25°C | **Evaporation Rate:** Not determined |
| **Coefficient Of Water/Oil Distribution:** Not determined | **VOC Content:** Not determined |
| **Flash Point:** Not applicable | **Autoignition Temp:** Not determined |
| **Decomposition Temperature:** Not determined | **Flammability Limits:** LEL: Not determined<br>UEL: Not determined |
| **Flammability (solid, gas):** Not applicable | |

## 10. Stability and Reactivity

**Reactivity:** Not normally reactive
**Chemical Stability:** Stable.
**Possibility of Hazardous Reactions:** None known
**Conditions To Avoid:** None known
**Incompatible Materials:** Strong oxidizing agents.
**Hazardous Decomposition Products:** Combustion of evaporated material may release oxides of sulfur and carbon.

## 11. Toxicological Information

**POTENTIAL HEALTH EFFECTS:**

**Acute Hazards:**

**Inhalation:** Inhalation of mists may cause upper respiratory tract irritation.

**Skin Contact:** May cause mild irritation.

**Eye Contact:** Contact may cause eye irritation.

**Ingestion:** Swallowing may cause gastrointestinal disturbances.

**Chronic Hazards:** None currently known.

**Carcinogenicity Listing:** None of the components is listed as a carcinogen or potential carcinogen by IARC, NTP, ACGIH or OSHA.

**Acute Toxicity Values:**

No data for product.

## 12. Ecological Information

**Ecotoxicity:**
No ecotoxicity data is currently available.

**Persistence and Degradability:** No data available

**Bio accumulative Potential:** No data available

**Mobility in Soil:** No data available

**Other Adverse Effects:** No data available

## 13. Disposal Considerations

Dispose of in accordance with all local, state/provincial and federal regulations. Offer empty containers for recycling.

## 14. Transport Information

**DOT Hazardous Materials Description:** Not Regulated

**Canadian TDG Hazardous Materials Description:** Not Regulated

**IMDG Dangerous Goods Description**: Not Regulated

## 15. Regulatory Information

**United States**:

**EPA TSCA INVENTORY**: All of the components of this material are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

**CERCLA Section 103:** This product has no RQ. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

**SARA Hazard Category (311/312):** Non-Hazardous

**SARA 313:** This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): None

**The Armor All/STP Products Company**
44 Old Ridgebury Road
Suite 300
Danbury, CT 06810
Tel. 1-203-205-2900

**Canada:**

**Canadian Environmental Protection Act:** All of the ingredients are listed on the Canadian DSL or the NDSL.

**Canadian WHMIS Classification:** Not a controlled product.

This SDS has been prepared according to the criteria of the Controlled Products Regulation (CPR) and the SDS contains all of the information required by the CPR.

## 16. Other Information

| | | | |
|---|---|---|---|
| NFPA Rating (NFPA 704): | Health: 1 | Fire: 0 | Instability: 0 |
| HMIS Rating: | Health: 1 | Fire: 0 | Physical Hazard: 0 |

REVISION SUMMARY: New SDS.

DATA SUPPLIED IS FOR USE ONLY IN CONNECTION WITH OCCUPATIONAL SAFETY AND HEALTH

# SAFETY DATA SHEET

**Issuing Date:** 29-Apr-2015 **Revision Date:** 29-Apr-2015 **Version** 1

## 1. IDENTIFICATION

| | |
|---|---|
| **Product Name** | Mr. Clean Multi-Purpose Cleaner with Febreze Freshness (Meadows & Rain Scent)_new formula |
| **Product ID:** | 97086254_RET_NG |
| **Product Type:** | Finished Product - Consumer (Retail) Use Only |
| **Recommended Use** | Hard Surface Cleaner |
| **Manufacturer** | PROCTER & GAMBLE - Fabric and Home Care Division<br>Ivorydale Technical Centre<br>5289 Spring Grove Avenue<br>Cincinnati, Ohio 45217-1087 USA<br><br>Procter & Gamble Inc.<br>P.O. Box 355, Station A<br>Toronto, ON M5W 1C5<br>1-800-331-3774 |
| **E-mail Address** | pgsds.im@pg.com |
| **Emergency Telephone** | Transportation (24 HR)<br>CHEMTREC - 1-800-424-9300<br>(U.S./ Canada) or 1-703-527-3887<br>Mexico toll free in country: 800-681-9531 |

## 2. HAZARD IDENTIFICATION

"Consumer Products", as defined by the US Consumer Product Safety Act and which are used as intended (typical consumer duration and frequency), are exempt from the OSHA Hazard Communication Standard (29 CFR 1910.1200). This SDS is being provided as a courtesy to help assist in the safe handling and proper use of the product.

**This product is classifed under 29CFR 1910.1200(d) and the Canadian Hazardous Products Regulation as follows:.**

Not Classified.

| | |
|---|---|
| **Hazard Statements** | None |
| **Hazard pictograms** | None |
| **Precautionary Statements - Prevention** | None |
| **Precautionary Statements - Response** | None |

| | |
|---|---|
| **Precautionary Statements - Storage** | None |
| **Precautionary Statements - Disposal** | None |
| **Hazards not otherwise classified (HNOC)** | None |

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Ingredients are listed according to 29CFR 1910.1200 Appendix D and the Canadian Hazardous Products Regulation**

| | |
|---|---|
| **Hazardous ingredients** | None. |

## 4. FIRST AID MEASURES

**First aid measures for different exposure routes**

| | |
|---|---|
| **Eye contact** | Rinse with plenty of water. Get medical attention immediately if irritation persists. |
| **Skin contact** | Rinse with plenty of water. Get medical attention if irritation develops and persists. |
| **Ingestion** | Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately if symptoms occur. |
| **Inhalation** | Move to fresh air. If symptoms persist, call a physician. |
| **Most important symptoms/effects, acute and delayed** | None under normal use conditions. |

**Indication of immediate medical attention and special treatment needed, if necessary**

| | |
|---|---|
| **Notes to Physician** | Treat symptomatically. |

## 5. FIRE-FIGHTING MEASURES

| | |
|---|---|
| **Suitable extinguishing media** | Dry chemical, $CO_2$, alcohol-resistant foam or water spray. Dry chemical. Alcohol-resistant foam. |
| **Unsuitable Extinguishing Media** | None. |
| **Special hazard** | None known. |
| **Special protective equipment for fire-fighters** | As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. |
| **Specific hazards arising from the chemical** | None. |

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Use personal protective equipment. Do not get in eyes, on skin, or on clothing.

**Advice for emergency responders** Use personal protective equipment as required.

**Environmental precautions** Keep out of waterways. Do not discharge product into natural waters without pre-treatment or adequate dilution.

**Methods and materials for containment and cleaning up**

**Methods for containment** Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Advice on safe handling** Use personal protective equipment as required. Keep container closed when not in use. Never return spills in original containers for re-use. Keep out of the reach of children.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

**Incompatible products** None known.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

**Exposure Guidelines** No exposure limits noted for ingredient(s).

**Exposure controls**

**Engineering Measures**

**Distribution, Workplace and Household Settings:**
Ensure adequate ventilation

**Product Manufacturing Plant (needed at Product-Producing Plant ONLY):**
Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction

**Personal Protective Equipment**

**Eye Protection**

**Distribution, Workplace and Household Settings:**
No special protective equipment required

**Product Manufacturing Plant (needed at Product-Producing Plant ONLY):**
Use appropriate eye protection

**Hand Protection**

**Distribution, Workplace and Household Settings:**
No special protective equipment required

**Product Manufacturing Plant (needed at Product-Producing Plant ONLY):**
Protective gloves

**Skin and Body Protection**

**Distribution, Workplace and Household Settings:**
No special protective equipment required

**Product Manufacturing Plant (needed at Product-Producing Plant ONLY):**
Wear suitable protective clothing

**Respiratory Protection**

**Distribution, Workplace and Household Settings:**
No special protective equipment required

**Product Manufacturing Plant (needed at Product-Producing Plant ONLY):**
In case of insufficient ventilation wear suitable respiratory equipment

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| **Physical State @20°C** | liquid |
| **Appearance** | colored liquid |
| **Odor** | Perfume |
| **Odor threshold** | No information available |

| Property | Values | Note |
|---|---|---|
| **pH value** | 11.0 | |
| **Melting/freezing point** | 0 °C / 32 °F | |
| **Boiling point/boiling range** | 100 °C / 212 °F | |
| **Flash point** | > 93.3 °C / > 200 °F | ASTM D 93 PMCC Product is an aqueous solution containing <= 24% alcohol and> 50% water |
| **Evaporation rate** | No information available | |
| **Flammability (solid, gas)** | No information available | |
| **Flammability Limits in Air** | | |
| **Upper flammability limit** | No information available | |
| **Lower Flammability Limit** | No information available | |
| **Vapor pressure** | No information available | |
| **Vapor density** | No information available | |
| **Relative density** | 0.99 g/cm^3 | |
| **Water solubility** | completely soluble | |
| **Solubility in other solvents** | No information available | |
| **Partition coefficient: n-octanol/water** | No information available | |
| **Autoignition temperature** | No information available | . |
| **Decomposition temperature** | No information available | . |
| **Viscosity of Product** | No information available | |
| **VOC Content (%)** | Products comply with US state and federal regulations for VOC content in consumer products. | |

## 10. STABILITY AND REACTIVITY

**Reactivity** None under normal use conditions.

**Stability** Stable under normal conditions.

**Hazardous polymerization** Hazardous polymerization does not occur.

**Hazardous Reactions** None under normal processing.

**Conditions to Avoid** None under normal processing.

**Materials to avoid** None in particular.

**Hazardous Decomposition Products** None under normal use.

## 11. TOXICOLOGICAL INFORMATION

**Product Information**

**Information on likely routes of exposure**

| | |
|---|---|
| **Inhalation** | No known effect. |
| **Skin contact** | No known effect. |
| **Ingestion** | No known effect. |
| **Eye contact** | No known effect. |

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

| | |
|---|---|
| **Acute toxicity** | No known effect. |
| **Skin corrosion/irritation** | No known effect. |
| **Serious eye damage/eye irritation** | No known effect. |
| **Skin sensitization** | No known effect. |
| **Respiratory sensitization** | No known effect. |
| **Germ cell mutagenicity** | No known effect. |
| **Neurological Effects** | No known effect. |
| **Reproductive toxicity** | No known effect. |
| **Developmental toxicity** | No known effect. |
| **Teratogenicity** | No known effect. |
| **STOT - single exposure** | No known effect. |
| **STOT - repeated exposure** | No known effect. |
| **Target Organ Effects** | No known effect. |
| **Aspiration hazard** | No known effect. |
| **Carcinogenicity** | No known effect. |

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

The product is not expected to be hazardous to the environment.

| | |
|---|---|
| **Persistence and degradability** | No information available. |
| **Bioaccumulative potential** | No information available. |
| **Mobility** | No information available. |
| **Other adverse effects** | No information available. |

## 13. DISPOSAL CONSIDERATIONS

**Waste treatment**

| | |
|---|---|
| **Waste from Residues / Unused Products** | Disposal should be in accordance with applicable regional, national and local laws and regulations. |
| **Contaminated packaging** | Disposal should be in accordance with applicable regional, national and local laws and regulations. |
| **California Hazardous Waste Codes (non-household setting)** | 331 |

## 14. TRANSPORT INFORMATION

| | |
|---|---|
| **DOT** | Not regulated |

**IMDG** Not regulated

**IATA** Not regulated

## 15. REGULATORY INFORMATION

**U.S. Federal Regulations**

**SARA 313**
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**CERCLA**
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

| Chemical Name | CAS-No | Hazardous Substances RQs | Extremely Hazardous Substances RQs | CERCLA/SARA 302 TPQ |
|---|---|---|---|---|
| Sodium hydroxide | 1310-73-2 | 1000 lb | - | |

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**
This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

**Clean Water Act**
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

| Chemical Name | CAS-No | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|---|---|---|---|---|---|
| Sodium hydroxide | 1310-73-2 | 1000 lb | - | - | X |

**California Proposition 65**
This product is not subject to warning labeling under California Proposition 65.

**U.S. State Regulations (RTK)**

| Chemical Name | CAS-No | Pennsylvania |
|---|---|---|
| 2-Aminoethanol | 141-43-5 | X |

**International Inventories**

**United States**
All intentionally-added components of this product(s) are listed on the US TSCA Inventory.

**Canada**
This product is in compliance with CEPA for import by P&G.

**Legend**
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
**CEPA** - Canadian Environmental Protection Act

## 16. OTHER INFORMATION

**Issuing Date:** 29-Apr-2015
**Revision Date:** 29-Apr-2015

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**