Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g), Rev. 2012 and GHS Rev 03.

Trade name: Non-Flammable Liquid Tire Buffer and Cleaner

(Contd. of page 10)

· ***Information about limitation of use:***
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.
· ***Chemical safety assessment:*** A Chemical Safety Assessment has not been carried out.

16 Other information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

· ***Date of preparation / last revision*** 05/13/2015 / 1
· ***Abbreviations and acronyms:***
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
Muta. 2: Germ cell mutagenicity, Hazard Category 2
Carc. 1B: Carcinogenicity, Hazard Category 1B
Carc. 2: Carcinogenicity, Hazard Category 2
Repr. 1A: Reproductive toxicity, Hazard Category 1A
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3
· **** Data compared to the previous version altered.***
SDS created by MSDS Authoring Services www.msdsauthoring.com (877) 204-9106

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ TYPE F
AUTOMATIC TRANSMISSION FLUID

Recommended use of the chemical and restrictions on use

Details of the supplier of the safety data sheet	**Emergency telephone number**
Ashland P.O. Box 2219 Columbus, OH 43216 United States of America EHS Customer Requests@ashland.com	1-800-ASHLAND (1-800-274-5263) **Regulatory Information Number** 1-800-325-3751 **Product Information** 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 (%)
MINERAL OIL		Not a hazardous substance or mixture.	7.64

HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	Asp. Tox. 1; H304	7.38
METHACRYLATE COPOLYMER		Eye Irrit. 2A; H319	1.52

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: 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. Water spray Foam Carbon dioxide (CO2) 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 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). 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. 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

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
MINERAL OIL		REL	5 mg/m3 Mist.	NIOSH/GUIDE
		STEL	10 mg/m3 Mist.	NIOSH/GUIDE
		PEL	5 mg/m3 Mist.	OSHA_TRANS
		TWA	5 mg/m3 Mist.	TN OEL
		TWA	5 mg/m3 Inhalable fraction.	ACGIH
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	REL	5 mg/m3 Mist.	NIOSH/GUIDE
		STEL	10 mg/m3 Mist.	NIOSH/GUIDE
		PEL	5 mg/m3 Mist.	OSHA_TRANS

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	:	red
Odour	:	hydrocarbon-like
Odour Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	> 390 °F / > 199 °C Method: Cleveland open cup
Evaporation rate	:	> 1 Ethyl Ether
Flammability (solid, gas)	:	No data available
Upper explosion limit	:	6 %(V) Calculated Explosive Limit
Lower explosion limit	:	1 %(V) Calculated Explosive Limit
Vapour pressure	:	0.0133333 hPa (21.11 °C) Calculated Vapor Pressure
Relative vapour density	:	No data available
Relative density	:	0.87 (15.6 °C)
Density	:	0.8750 g/cm3 (15.56 °C)
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	:	No data available
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.
Conditions to avoid	:	excessive heat
Incompatible materials	:	Strong oxidizing agents
Hazardous decomposition products		carbon dioxide and carbon monoxide 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.
Skin corrosion/irritation
Not classified based on available information.
Product:
Result: Repeated exposure may cause skin dryness or cracking.

Components:
MINERAL OIL:
Result: Mildly irritating to skin

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:
Result: Mildly irritating to skin

METHACRYLATE COPOLYMER:
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:
MINERAL OIL:
Result: Mildly irritating to eyes

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:
Result: Mildly irritating to eyes

METHACRYLATE COPOLYMER:
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.
Components:
HYDROTREATED LIGHT 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
No data available
Persistence and degradability
No data available

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse effects
No data available

Product:

Additional ecological information : No data available

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 : 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.
Component(s)SARA 313

Pennsylvania Right To Know

HEAVY PARAFFINIC DISTILLATE	64742-54-7	90.00 -

		100.00 %
MINERAL OIL	Not Assigned	5.00 - 10.00 %
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	5.00 - 10.00 %

New Jersey Right To Know

HEAVY PARAFFINIC DISTILLATE	64742-54-7	90.00 - 100.00 %
MINERAL OIL	Not Assigned	5.00 - 10.00 %
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	5.00 - 10.00 %
METHACRYLATE COPOLYMER	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:

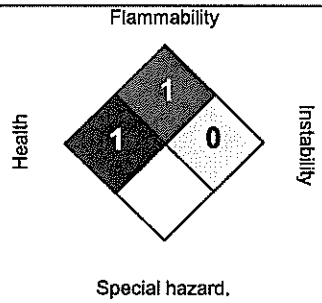
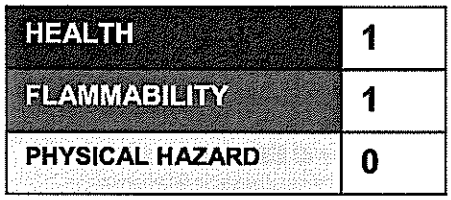
TSCA	:	On TSCA Inventory
DSL	:	All components of this product are on the Canadian DSL.
AUSTR	:	On the inventory, or in compliance with the inventory
ENCS	:	On the inventory, or in compliance with the inventory
KECL	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory

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.

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

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ CARB & CHOKE CLEANER
CARB & CHOKE CLEANER

Recommended use of the chemical and restrictions on use

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

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable aerosols	: Category 1
Acute toxicity (Oral)	: Category 4
Acute toxicity (Inhalation)	: Category 4
Acute toxicity (Dermal)	: Category 4
Skin irritation	: Category 2
Eye irritation	: Category 2A
Specific target organ systemic toxicity - single exposure	: Category 1 (Central nervous system, Eyes)
Specific target organ systemic toxicity - single exposure	: Category 3 (Respiratory system, Central nervous system)
Specific target organ systemic toxicity - repeated exposure	: Category 2 (Auditory system)

Aspiration hazard : Category 1

GHS Label element

Hazard pictograms :

Signal Word : Danger

Hazard Statements : Extremely flammable aerosol.
Harmful if swallowed, in contact with skin or if inhaled.
May be fatal if swallowed and enters airways.
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Causes damage to organs (Central nervous system, Eyes).
May cause damage to organs (Auditory system) through prolonged or repeated exposure.

Precautionary Statements : **Prevention:**
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Do not spray on an open flame or other ignition source.
Pressurized container: Do not pierce or burn, even after use.
Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear eye protection/ face protection.
Wear protective gloves/ protective clothing.
Response:
IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/ physician if you feel unwell.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed: Call a POISON CENTER or doctor/ physician.
Do NOT induce vomiting.
If skin irritation occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.
Storage:
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Protect from sunlight. Do not expose to temperatures exceeding

50 °C/ 122 °F.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Static Accumulator

Chemical nature : Defatter

Hazardous components

Chemical Name	CAS-No.	Classification	Concentration (%)
ACETONE	67-64-1	Flam. Liq. 2; H225 Eye Irrit. 2A; H319 STOT SE 3; H336	51.80
METHANOL	67-56-1	Flam. Liq. 2; H225 Acute Tox. 3; H301 Acute Tox. 3; H331 Acute Tox. 3; H311 STOT SE 1; H370	22.07
XYLENE	1330-20-7	Flam. Liq. 3; H226 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 STOT SE 3; H335, H336 Asp. Tox. 1; H304	20.12

ETHYL BENZENE	100-41-4	Flam. Liq. 2; H225 Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 STOT RE 2; H373 Asp. Tox. 1; H304	6.03
CARBON DIOXIDE	124-38-9	Press. Gas Liquefied gas; H280	6.00

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Call a POISON CENTRE or doctor/physician if exposed or you feel unwell.
Show this safety data sheet to the doctor in attendance.
Symptoms of poisoning may appear several hours later.
Do not leave the victim unattended.

If inhaled : Move to fresh air.
Keep patient warm and at rest.
If unconscious place in recovery position and seek medical advice.
Consult a physician after significant exposure.

In case of skin contact : Remove contaminated clothing. If irritation develops, get medical attention.
If on skin, rinse well with water.
Wash contaminated clothing before re-use.

In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.

If swallowed : Obtain medical attention.
Do NOT induce vomiting.
Rinse mouth with water.

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 : This material (or a component) has produced hyperglycemia and ketosis following substantial ingestion.
This product contains methanol which can cause intoxication and central nervous system depression. Methanol is metabolized to formic acid and formaldehyde. These metabolites can cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used to prevent methanol metabolism. Ethanol administration is indicated in symptomatic patients or at blood methanol concentrations above 20 ug/dl. Methanol is effectively removed by hemodialysis.
Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material.
Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:
redness of the skin
stomach or intestinal upset (nausea, vomiting, diarrhea)
irritation (nose, throat, airways)
discomfort in the chest
effects on memory
muscle cramps
pain in the abdomen and lower back
Blurred vision
Shortness of breath
confusion
irregular heartbeat
cyanosis (causes blue coloring of the skin and nails from lack of oxygen)
visual impairment (including blindness)
Harmful if swallowed, in contact with skin or if inhaled
May be fatal if swallowed and enters airways.
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Causes damage to organs.
May cause damage to organs through prolonged or repeated exposure.

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. Water spray Foam Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during firefighting	:	Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	carbon dioxide and carbon monoxide Hydrocarbons Aldehydes
Specific extinguishing methods	:	Product is compatible with standard fire-fighting agents.
Further information	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Use a water spray to cool fully closed containers.
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	:	Evacuate personnel to safe areas. Remove all sources of ignition. Use personal protective equipment. Ensure adequate ventilation. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform

respective authorities.

Other information : Comply with all applicable federal, state, and local regulations. Suppress (knock down) gases/vapours/mists with a water spray jet.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Open drum carefully as content may be under pressure.
Provide sufficient air exchange and/or exhaust in work rooms.
Do not breathe vapours/dust.
Do not smoke.
Container hazardous when empty.
Take precautionary measures against static discharges.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.
Dispose of rinse water in accordance with local and national regulations.
Container may be opened only under exhaust ventilation hood.

Conditions for safe storage : BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects.
Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Observe label precautions.
No smoking.
Electrical installations / working materials must comply with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
ACETONE	67-64-1	TWA	500 ppm	ACGIH
		STEL	750 ppm	ACGIH
		REL	250 ppm	NIOSH/GUID

			590 mg/m3	E
		PEL	1,000 ppm 2,400 mg/m3	OSHA_TRANS
		TWA	250 ppm	ACGIHLIS_P
		STEL	500 ppm	ACGIHLIS_P
		TWA	750 ppm 1,800 mg/m3	Z1A
		STEL	1,000 ppm 2,400 mg/m3	Z1A
METHANOL	67-56-1	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		REL	200 ppm 260 mg/m3	NIOSH/GUIDE
		STEL	250 ppm 325 mg/m3	NIOSH/GUIDE
		PEL	200 ppm 260 mg/m3	OSHA_TRANS
		TWA	200 ppm 260 mg/m3	TN OEL
		STEL	250 ppm 325 mg/m3	TN OEL
XYLENE	1330-20-7	TWA	100 ppm	ACGIH
		STEL	150 ppm	ACGIH
		PEL	100 ppm 435 mg/m3	OSHA_TRANS
		REL	100 ppm 435 mg/m3	NIOSH/GUIDE
		STEL	150 ppm 655 mg/m3	NIOSH/GUIDE
ETHYL BENZENE	100-41-4	TWA	20 ppm	ACGIH
		REL	100 ppm 435 mg/m3	NIOSH/GUIDE
		STEL	125 ppm 545 mg/m3	NIOSH/GUIDE
		PEL	100 ppm 435 mg/m3	OSHA_TRANS
CARBON DIOXIDE	124-38-9	TWA	5,000 ppm	ACGIH
		STEL	30,000 ppm	ACGIH
		REL	5,000 ppm 9,000 mg/m3	NIOSH/GUIDE
		STEL	30,000 ppm 54,000 mg/m3	NIOSH/GUIDE
		PEL	5,000 ppm 9,000 mg/m3	OSHA_TRANS

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
ACETONE	67-64-1	acetone	Urine	Sampling time:	50 mg/l	

				End of shift.		
Remarks:	Nonspecific					
METHANOL	67-56-1	methanol	Urine	Sampling time: End of shift.	15 mg/l	
Remarks:	Background, Nonspecific					
XYLENE	1330-20-7	Methylhippuric acids	Creatinine in urine	Sampling time: End of shift.	1.5 g/g	
ETHYL BENZENE	100-41-4	Sum of mandelic acid and phenylglyoxylic acid	Creatinine in urine	Sampling time: End of shift.	0.15 g/g	ACGIH BEI
Remarks:	Nonspecific					

Engineering measures : 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 : In the case of vapour formation use a respirator with an approved filter.
In the case of dust or aerosol formation use respirator with an approved filter.

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. 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 not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

Hand protection
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.

Skin and body protection : Wear as appropriate:
impervious clothing
Safety shoes
Flame-resistant clothing

Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Discard gloves that show tears, pinholes, or signs of wear.
Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : Wash hands before breaks and at the end of workday.
When using do not eat or drink.
When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	:	aerosol
Odour	:	No data available
Odour Threshold	:	No data available
pH	:	No data available
	:	No data available
Boiling point/boiling range	:	133 °F / 56 °C (1,013.232 hPa) Calculated Phase Transition Liquid/Gas
Flash point	:	-4 °F / -20 °C
Evaporation rate	:	No data available
Flammability (solid, gas)	:	
		No data available
		No data available
Flammability (liquids)	:	Static Accumulating liquid
Flammability (liquids)	:	
Flammability (liquids)	:	
Upper explosion limit	:	36 %(V) Calculated Explosive Limit
Lower explosion limit	:	1 %(V) Calculated Explosive Limit
Vapour pressure	:	307.9692 hPa (25 °C) Calculated Vapor Pressure
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	0.8132 g/cm3 (15.56 °C)

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	:	No data available
Oxidizing properties	:	No data available
Heat of combustion	:	Estimated 30.0 kJ/g

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	:	Vapours may form explosive mixture with air.
Conditions to avoid	:	Heat, flames and sparks. excessive heat
Incompatible materials	:	Acids alkalis aluminum Amines Ammonia halogens Lead peroxides Reducing agents sodium strong bases Strong oxidizing agents Zinc Peroxides
Hazardous decomposition products		carbon dioxide and carbon monoxide formaldehyde-like

Hydrocarbons

SECTION 11. TOXICOLOGICAL INFORMATION

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

Acute toxicity
Harmful if swallowed, in contact with skin or if inhaled
Components:
ACETONE:
Acute oral toxicity : LD 50 (Rat, female): 5,800 mg/kg

Acute inhalation toxicity : LC 50 (Rat, female): 76 mg/l
Exposure time: 4 h

Acute dermal toxicity : LD 50 (Rabbit): > 7,426 mg/kg

METHANOL:
Acute oral toxicity : LD L0 (Human): 300 mg/kg
Assessment: The component/mixture is classified as acute oral toxicity, category 3.

Acute inhalation toxicity : LC 50 (Rat): 64000 ppm
Exposure time: 4 h

Assessment: The component/mixture is classified as acute inhalation toxicity, category 3.
Remarks: Slightly toxic by inhalation

Acute dermal toxicity : LD 50 (Rabbit): 12,800 mg/kg
Assessment: The component/mixture is classified as acute dermal toxicity, category 3.

XYLENE:
Acute oral toxicity : LD 50 (Rat): 3,523 - 8,600 mg/kg

Acute inhalation toxicity : LC 50 (Rat): 6700 ppm
Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD 50 (Rabbit): 1,700 mg/kg

ETHYL BENZENE:
Acute oral toxicity : LD 50 (Rat): ca. 3,500 mg/kg

Acute inhalation toxicity : LC50 (Rat): 4000 ppm
Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD 50 (Rabbit): 17,800 mg/kg

Skin corrosion/irritation
Causes skin irritation.
Product:
Remarks: May cause skin irritation and/or dermatitis.

Result: Repeated exposure may cause skin dryness or cracking.

Components:
ACETONE:
Result: Mildly irritating to skin

Result: Repeated exposure may cause skin dryness or cracking.

METHANOL:
Species: Rabbit
Result: Not irritating to skin

XYLENE:
Result: Irritating to skin

ETHYL BENZENE:
Result: Irritating to skin

CARBON DIOXIDE:
Result: Not irritating to skin

Serious eye damage/eye irritation
Causes serious eye irritation.
Product:
Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin., Causes serious eye irritation.

Components:
ACETONE:
Result: Irritating to eyes

METHANOL:
Species: Rabbit
Result: Mildly irritating to eyes

XYLENE:
Result: Irritating to eyes

ETHYL BENZENE:
Result: Irritating to eyes
Remarks: Exposure to a concentration of 5000 ppm causes intolerable irritation of the eyes

CARBON DIOXIDE:
Result: Not irritating to eyes

Respiratory or skin sensitisation
Skin sensitisation: Not classified based on available information.
Respiratory sensitisation: Not classified based on available information.
Components:
METHANOL:
Test Type: Maximisation Test (GPMT)
Species: Guinea pig
Assessment: Does not cause skin sensitisation.
Method: OECD Test Guideline 406

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
May cause respiratory irritation.
May cause drowsiness or dizziness.
Causes damage to organs (Central nervous system, Eyes).
Components:
ACETONE:
Exposure routes: Inhalation
Target Organs: Nervous system
Assessment: May cause drowsiness or dizziness.

METHANOL:
Target Organs: Central nervous system, Eyes
Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 1.

XYLENE:
Assessment: May cause respiratory irritation., May cause drowsiness or dizziness.

STOT - repeated exposure
May cause damage to organs (Auditory system) through prolonged or repeated exposure.
Components:
ETHYL BENZENE:
Target Organs: Auditory system
Assessment: May cause damage to organs through prolonged or repeated exposure.

Aspiration toxicity
May be fatal if swallowed and enters airways.
Product:
May be fatal if swallowed and enters airways.

Components:
ACETONE:
May be harmful if swallowed and enters airways.

XYLENE:
May be fatal if swallowed and enters airways.

ETHYL BENZENE:
May be fatal if swallowed and enters airways.

Further information
Product:
Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting., Concentrations substantially above the TLV value may cause narcotic effects., Solvents may degrease the skin.

Components:
METHANOL:
Remarks: Central nervous system

ETHYL BENZENE:
Remarks: Central nervous system

Carcinogenicity:

IARC	Group 2B: Possibly carcinogenic to humans
	ETHYL BENZENE 100-41-4
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:
ACETONE:

Toxicity to fish	: LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss)): 4,740 - 6,330 mg/l Exposure time: 96 h Test Type: static test LC 50 (Fathead minnow (Pimephales promelas)): 8,733 - 9,482 mg/l Exposure time: 96 h Test Type: flow-through test
Toxicity to algae	: NOEC (Microcystis aeruginosa): 530 mg/l Exposure time: 8 d Test Type: static test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 2,112 mg/l Exposure time: 28 d Test Type: flow-through test

METHANOL:

Toxicity to fish	:	LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss)): 18,000 - 20,000 mg/l Exposure time: 96 h Test Type: static test
Toxicity to daphnia and other aquatic invertebrates	:	EC 50 (Water flea (Daphnia magna)): > 10,000 mg/l Exposure time: 48 h Test Type: static test

XYLENE:

Toxicity to fish	:	LC 50 (Fathead minnow (Pimephales promelas)): 23.53 - 29.97 mg/l Exposure time: 96 h Test Type: static test
Toxicity to daphnia and other aquatic invertebrates	:	LC 50 (Water flea (Daphnia magna)): > 100 - < 1,000 mg/l Exposure time: 24 h Test Type: static test

ETHYL BENZENE:

Toxicity to fish	:	LC 50 (Fathead minnow (Pimephales promelas)): 9.1 - 15.6 mg/l Exposure time: 96 h Test Type: static test LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss)): 4.2 mg/l Exposure time: 96 h Test Type: Renewal
Toxicity to daphnia and other aquatic invertebrates	:	EC 50 (Water flea (Daphnia magna)): 1.37 - 4.4 mg/l Exposure time: 48 h Test Type: static test
Toxicity to algae	:	(Pseudokirchneriella subcapitata (green algae)): 3.6 mg/l End point: EC 50 Exposure time: 96 h Test Type: Growth inhibition

Persistence and degradability

Components:

ACETONE:

Biodegradability	:	Result: Readily biodegradable Biodegradation: 90.9 % Exposure time: 28 d Method: OECD Test Guideline 301B

METHANOL:

Biodegradability : Biodegradation: 99 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

XYLENE:

Physico-chemical removability : Remarks: The product evaporates readily.

ETHYL BENZENE:

Biodegradability : Result: Readily biodegradable
Biodegradation: 70 - 80 %
Exposure time: 28 d

Bioaccumulative potential

Components:

ACETONE:
Partition coefficient: n-octanol/water : log Pow: -0.24

METHANOL:
Bioaccumulation : Species: Green algae (Chlorella fusca vacuolata)
Bioconcentration factor (BCF): 28,400
Exposure time: 24 h
Concentration: 0.05 mg/l
Method: Static

Partition coefficient: n-octanol/water : log Pow: -0.77

XYLENE:
Partition coefficient: n-octanol/water : log Pow: 3.16

ETHYL BENZENE:
Partition coefficient: n-octanol/water : log Pow: 3.15

Mobility in soil

Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Harmful to aquatic life.

Components:

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

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

Contaminated packaging : Empty remaining contents.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

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

	ORM-D, CONSUMER COMMODITY	ORM

U.S. DOT - RAIL

	ORM-D, CONSUMER COMMODITY	ORM

U.S. DOT - INLAND WATERWAYS

	ORM-D, CONSUMER COMMODITY	ORM

TRANSPORT CANADA - ROAD

UN	1950	AEROSOLS	2.1

TRANSPORT CANADA - RAIL

UN	1950	AEROSOLS	2.1

TRANSPORT CANADA - INLAND WATERWAYS

UN	1950	AEROSOLS	2.1	

INTERNATIONAL MARITIME DANGEROUS GOODS

UN	1950	AEROSOLS	2.1	LIMITED QUANTITY

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN	1950	Aerosols, flammable	2.1

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN	1950	Aerosols, flammable	2.1

MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

UN	1950	AEROSOLES	2

***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

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
XYLENE	1330-20-7	100	496.985781

SARA 311/312 Hazards : Acute Health Hazard
Fire Hazard
Chronic Health Hazard

SARA 313 Component(s)

METHANOL	67-56-1	22.07 %

	XYLENE	1330-20-7	20.12 %
	ETHYL BENZENE	100-41-4	6.03 %

Pennsylvania Right To Know

ACETONE	67-64-1	50.00 - 70.00 %
METHANOL	67-56-1	20.00 - 30.00 %
XYLENE	1330-20-7	20.00 - 30.00 %
ETHYL BENZENE	100-41-4	5.00 - 10.00 %
CARBON DIOXIDE	124-38-9	5.00 - 10.00 %

New Jersey Right To Know

ACETONE	67-64-1	50.00 - 70.00 %
METHANOL	67-56-1	20.00 - 30.00 %
XYLENE	1330-20-7	20.00 - 30.00 %
ETHYL BENZENE	100-41-4	5.00 - 10.00 %
CARBON DIOXIDE	124-38-9	5.00 - 10.00 %

California Prop 65

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

ETHYL BENZENE	100-41-4
BENZENE	71-43-2

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

METHANOL	67-56-1
TOLUENE	108-88-3
BENZENE	71-43-2

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

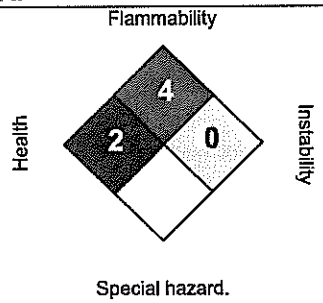
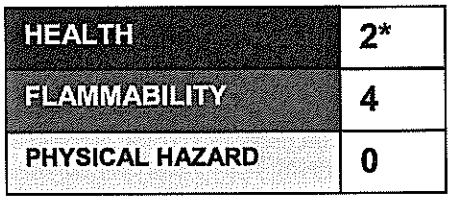
TSCA	:	On TSCA Inventory
DSL	:	All components of this product are on the Canadian DSL.
AUSTR	:	On the inventory, or in compliance with the inventory
NZIOC	:	On the inventory, or in compliance with the inventory
ENCS	:	On the inventory, or in compliance with the inventory

KECL	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory

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
Not applicable

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

H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
H280	Contains gas under pressure; may explode if heated.
H301	Toxic if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H370	Causes damage to organs.
H373	May cause damage to organs through prolonged or repeated exposure.

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

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity
Product Name: 578-2/578-3 ANTIFREEZE
SAP Material No: NP001
General or Generic ID: GLYCOL
Company Telephone Numbers
The Valvoline Company Emergency: 1-800-274-5263
P.O. Box 14000
Lexington, KY 40512 Information: 1-859-357-7206

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	% (by weight)
ETHYLENE GLYCOL	107-21-1	90.0- 90.0
DIETHYLENE GLYCOL	111-46-6	1.0- 10.0
WATER	7732-18-5	1.0- 8.0
DIPOTASSIUM PHOSPHATE	7758-11-4	1.0- 7.0

3. HAZARDS IDENTIFICATION

Potential Health Effects
Eye
May cause mild eye irritation.
Skin
May cause mild skin irritation. Although rare, skin contact with ethylene glycol may cause allergic skin reaction (delayed skin rash which may be followed by blistering, scaling and other skin effects). Passage through the skin may add to toxic effects from breathing or swallowing.

Swallowing
Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful.
Inhalation
Breathing of vapor or mist is possible.
Symptoms of Exposure
stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), central nervous system excitation (giddiness, liveliness, light-headed feeling) followed by central nervous system depression (dizziness, drowsiness,

weakness, fatigue, nausea, headache, unconsciousness) and other central nervous system effects, involuntary eye movement, kidney damage.

Target Organ Effects

Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals, and may aggravate preexisting disorders of these organs in humans: kidney damage, Overexposure to this material components) has been suggested as a cause of the following effects in humans, and may aggravate preexisting disorders of these organs: central nervous system effects, liver abnormalities, kidney damage, liver damage.

Developmental Information

Ethylene glycol has caused birth defects in animal studies at high oral doses.

Cancer Information

No data

Other Health Effects

No data

Primary Route(s) of Entry

Skin absorption.

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4. FIRST AID MEASURES

Eyes

If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

Skin

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

Swallowing

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

Note to Physicians

This product contains ethylene glycol. Ethanol decreases the

metabolism of ethylene glycol to toxic metabolites. Ethanol should be administered as soon as possible in cases of severe poisoning since the elimination half-life of ethylene glycol is 3 hours. If medical care will be delayed several hours, give the patient three to four 1-ounce oral "shots" of 86-proof or higher whiskey before or during transport to the hospital. Fomepizole (4-methylpyrazole) is an effective antagonist of alcohol dehydrogenase, and as such, may be used as an antidote in the treatment of ethylene glycol poisoning. Hemodialysis effectively

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removes ethylene glycol and its metabolites from the body. Effects of acute ethylene glycol poisoning appear in three fairly distinct stages. The initial stage occurs shortly after exposure, lasts 6-12 hours, and is characterized by central nervous system effects (transient exhilaration, nausea, vomiting, and in severe cases, coma, convulsions, and possible death. The second stage lasts from 12-36 hours after exposure and is initiated by the onset of coma. This phase is characterized by tachypnia, tachycardia, mild hypotension, cyanosis, and in severe cases, pulmonary edema, bronchopneumonia, cardiac enlargement, and congestive failure. The final stage occurs 24-72 post-exposure and is characterized by renal failure ranging from a mild increase in blood urea nitrogen and creatinine followed by recovery to complete anuria with acute tubular necrosis that can lead to death. Oxaluria is found in most cases. The most significant laboratory finding in ethylene glycol intoxication is severe metabolic acidosis.

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5. FIRE FIGHTING MEASURES
Flash Point
250.0 F (121.1 C)
Explosive Limit
(for component) Lower 3.2 Upper 15.3 %
Autoignition Temperature
No data
Hazardous Products of Combustion
May form: carbon dioxide and carbon monoxide, various hydrocarbons.
Fire and Explosion Hazards
Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

Extinguishing Media
alcohol foam, carbon dioxide, dry chemical.
Fire Fighting Instructions
Wear a self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.
NFPA Rating
Health - 1, Flammability - 1, Reactivity - 0

6. ACCIDENTAL RELEASE MEASURES

Small Spill
Absorb liquid on vermiculite, floor absorbent or other absorbent material.
Large Spill
Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source, dike area of spill to prevent spreading, pump liquid to salvage tank. Remaining liquid may be taken up on sand, clay, earth, floor absorbent, or other absorbent material and shoveled into containers.

7. HANDLING AND STORAGE

Handling
Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

Storage
Not applicable

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection
Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.
Skin Protection
Wear resistant gloves such as: neoprene, nitrile rubber, polyvinyl chloride, To prevent repeated or prolonged skin contact, wear impervious clothing and boots.
Respiratory Protections
If workplace exposure limit(s) of product or any component is

exceeded (See Exposure Guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (consult your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.
Engineering Controls
Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).
Exposure Guidelines
Component

ETHYLENE GLYCOL (107-21-1)
OSHA VPEL 50.000 ppm - Ceiling
ACGIH TLV 100.000 mg/m3 - Ceiling as an aerosol
DIETHYLENE GLYCOL (111-46-6)
No exposure limits established
WATER (7732-18-5)
No exposure limits established

DIPOTASSIUM PHOSPHATE (7758-11-4)
No exposure limits established

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9. PHYSICAL AND CHEMICAL PROPERTIES
Boiling Point
(for product) 330.0 F (165.5 C) @ 760.00 mmHg
Vapor Pressure
(for product) 1.800 mmHg @ 68.00 F
Specific Vapor Density
No data
Specific Gravity
1.127 @ 60.00 F
Liquid Density
9.388 lbs/gal @ 60.00 F
1.127 kg/l @ 15.60 C
Percent Volatiles (Including Water)
No data
Evaporation Rate
No data
Appearance
No data
State
LIQUID

Physical Form
No data
Color
No data
Odor
No data
pH
10.2 - 11.2

10. STABILITY AND REACTIVITY
Hazardous Polymerization
Product will not undergo hazardous polymerization.
Hazardous Decomposition
May form: carbon dioxide and carbon monoxide, various hydrocarbons.
Chemical Stability
Stable.
Incompatibility
Avoid contact with: strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION
No data

12. ECOLOGICAL INFORMATION
No data

13. DISPOSAL CONSIDERATION
Waste Management Information
Destroy by liquid incineration. Dispose of in accordance with all applicable local, state and federal regulations.

14. TRANSPORT INFORMATION
DOT Information - 49 CFR 172.101
DOT Description:
Not Regulated
Container/Mode:
CASES/SURFACE - NO EXCEPTIONS
NOS Component:
None
RQ (Reportable Quantity) - 49 CFR 172.101
Product Quantity (lbs) Component
---------- ----------

5539 ETHYLENE GLYCOL

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15. REGULATORY INFORMATION
US Federal Regulations
TSCA (Toxic Substances Control Act) Status
TSCA (UNITED STATES) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4

Component	Component
ETHYLENE GLYCOL	1

SARA 302 Components - 40 CFR 355 Appendix A
None
Section 311/312 Hazard Class - 40 CFR 370.2
Immediate(X) Delayed(X) Fire( ) Reactive( ) Sudden Release of Pressure( )
SARA 313 Components - 40 CFR 372.65

Section 313 Component(s)	CAS Number
ETHYLENE GLYCOL	107-21-1

International Regulations
Inventory Status
DSL (CANADA) The intentional ingredients of this product are listed.
State and Local Regulations
California Proposition 65
None
New Jersey RTK Label Information
ETHYLENE GLYCOL 107-21-1
Pennsylvania RTK Label Information
1,2-ETHANEDIOL 107-21-1

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16. OTHER INFORMATION
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.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity
Product Name: 578-2/578-3 ANTIFREEZE
SAP Material No: NP001
General or Generic ID: GLYCOL
Company Telephone Numbers
The Valvoline Company Emergency: 1-800-274-5263
P.O. Box 14000
Lexington, KY 40512 Information: 1-859-357-7206

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	% (by weight)
ETHYLENE GLYCOL	107-21-1	90.0- 90.0
DIETHYLENE GLYCOL	111-46-6	1.0- 10.0
WATER	7732-18-5	1.0- 8.0
DIPOTASSIUM PHOSPHATE	7758-11-4	1.0- 7.0

3. HAZARDS IDENTIFICATION

Potential Health Effects
Eye
Can cause eye irritation.
Skin
May cause mild skin irritation. Although rare, skin contact with ethylene glycol may cause allergic skin reaction (delayed skin rash which may be followed by blistering, scaling and other skin effects). Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects during safe handling and use.

Swallowing
Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. Liver, kidney and brain damage in humans has resulted from swallowing lethal or near-lethal amounts of ethylene glycol.
Inhalation
It is possible to breathe this material under certain conditions

of handling and use (for example, during heating, spraying, or stirring). Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Symptoms usually occur at air concentrations higher than the recommended exposure limits (See Section 8).

Symptoms of Exposure

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea) irritation (nose, throat, airways), cough, central nervous system excitation (giddiness, liveliness, light-headed feeling) followed by central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness) and other central nervous system effects, involuntary eye movement, pain in the abdomen and lower back, cyanosis (causes blue coloring of the skin and nails from lack of oxygen), lung edema (fluid buildup in the lung tissue), acute kidney failure (sudden slowing or stopping of urine production), kidney damage, liver damage, convulsions, coma, and death.

Target Organ Effects

Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals, and may aggravate preexisting disorders of these organs in humans: reproductive effects, liver damage, central nervous system damage, kidney damage, Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans, and may aggravate preexisting disorders of these organs: central nervous system effects, kidney damage, liver damage.

Developmental Information

This material (or a component) has been shown to cause harm to the fetus in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain. Ethylene glycol has caused birth defects in animal studies at high oral doses.

Cancer Information

Based on the available information, this material cannot be classified with regard to carcinogenicity. This material is not listed as a carcinogen by the International Agency for Research on Cancer, the National Toxicology Program, or the Occupational Safety and Health Administration.

Other Health Effects

No data

Primary Route(s) of Entry

Inhalation, Skin absorption, Skin contact, Eye contact, Ingestion.

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4. FIRST AID MEASURES

Eyes

If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

Skin

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

Swallowing

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

Note to Physicians

This product contains ethylene glycol. Ethanol decreases the metabolism of ethylene glycol to toxic metabolites. Ethanol should be administered as soon as possible in cases of severe poisoning since the elimination half-life of ethylene glycol is 3 hours. If medical care will be delayed several hours, give the patient three to four 1-ounce oral "shots" of 86-proof or higher whiskey before or during transport to the hospital. Fomepizole (4-methylpyrazole) is an effective antagonist of alcohol dehydrogenase, and as such, may be used as an antidote in the treatment of ethylene glycol poisoning. Hemodialysis effectively removes ethylene glycol and its metabolites from the body. Effects of acute ethylene glycol poisoning appear in three fairly distinct stages. The initial stage occurs shortly after exposure, lasts 6-12 hours, and is characterized by central nervous system effects (transient exhilaration, nausea, vomiting, and in severe cases, coma, convulsions, and possible death. The second stage lasts from 12-36 hours after exposure and is initiated by the onset of coma. This phase is characterized by tachypnia, tachycardia, mild hypotension, cyanosis, and in severe cases, pulmonary edema, bronchopneumonia, cardiac enlargement, and congestive failure. The final stage occurs 24-72 post-exposure and is characterized by renal failure ranging from a mild increase in blood urea nitrogen and creatinine followed by recovery to complete anuria with acute tubular necrosis that can lead to

death. Oxaluria is found in most cases. The most significant laboratory finding in ethylene glycol intoxication is severe metabolic acidosis. Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: lung (for example, asthma-like conditions), liver, kidneys, central nervous system, Exposure to this material may aggravate any pre-existing condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease or anemias.

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5. FIRE FIGHTING MEASURES

Flash Point

250.0 F (121.1 C)

Explosive Limit

(for component) Lower 3.2 Upper 15.3 %

Autoignition Temperature

No data

Hazardous Products of Combustion

May form: carbon dioxide and carbon monoxide, various hydrocarbons.

Fire and Explosion Hazards

Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

Extinguishing Media

alcohol foam, carbon dioxide, dry chemical.

Fire Fighting Instructions

Wear a self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.

NFPA Rating

Health - 1, Flammability - 1, Reactivity - 0

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6. ACCIDENTAL RELEASE MEASURES

Small Spill

Absorb liquid on vermiculite, floor absorbent or other absorbent material.

Large Spill
Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source, dike area of spill to prevent spreading, pump liquid to salvage tank. Remaining liquid may be taken up on sand, clay, earth, floor absorbent, or other absorbent material and shoveled into containers.

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7. HANDLING AND STORAGE
Handling
Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.
Storage
Not applicable

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Eye Protection
Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.
Skin Protection
Wear resistant gloves such as: neoprene, nitrile rubber, polyvinyl chloride, To prevent repeated or prolonged skin contact, wear impervious clothing and boots.
Respiratory Protections
If workplace exposure limit(s) of product or any component is exceeded (See Exposure Guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (consult your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

Engineering Controls
Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).
Exposure Guidelines
Component

ETHYLENE GLYCOL (107-21-1)
OSHA VPEL 50.000 ppm - Ceiling
ACGIH TLV 100.000 mg/m3 - Ceiling as an aerosol
DIETHYLENE GLYCOL (111-46-6)
No exposure limits established
WATER (7732-18-5)

No exposure limits established
DIPOTASSIUM PHOSPHATE (7758-11-4)
No exposure limits established

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9. PHYSICAL AND CHEMICAL PROPERTIES
Boiling Point
(for product) 330.0 F (165.5 C) @ 760.00 mmHg
Vapor Pressure
(for product) 1.800 mmHg @ 68.00 F
Specific Vapor Density
No data
Specific Gravity
1.127 @ 60.00 F

Liquid Density
9.388 lbs/gal @ 60.00 F
1.127 kg/l @ 15.60 C
Percent Volatiles (Including Water)
No data
Evaporation Rate
No data
Appearance
No data
State
LIQUID
Physical Form
No data
Color
No data
Odor
No data
pH
10.2 - 11.2

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10. STABILITY AND REACTIVITY
Hazardous Polymerization
Product will not undergo hazardous polymerization.
Hazardous Decomposition
May form: carbon dioxide and carbon monoxide, various hydrocarbons.

Chemical Stability
Stable.
Incompatibility
Avoid contact with: strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION
No data

12. ECOLOGICAL INFORMATION
No data

13. DISPOSAL CONSIDERATION
Waste Management Information
Dispose of in accordance with all applicable local, state and federal regulations. Do not discharge effluent containing this product into lakes, streams, ponds or estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit, and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

14. TRANSPORT INFORMATION
DOT Information - 49 CFR 172.101
DOT Description:
Not Regulated

Container/Mode:
CASES/SURFACE - NO EXCEPTIONS
NOS Component:
None
RQ (Reportable Quantity) - 49 CFR 172.101

Product Quantity (lbs)	Component
5539	ETHYLENE GLYCOL

15. REGULATORY INFORMATION
US Federal Regulations
TSCA (Toxic Substances Control Act) Status
TSCA (UNITED STATES) The intentional ingredients of this product are listed.
CERCLA RQ - 40 CFR 302.4
Component Component

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ETHYLENE GLYCOL 5000
SARA 302 Components - 40 CFR 355 Appendix A
None
Section 311/312 Hazard Class - 40 CFR 370.2
Immediate(X) Delayed(X) Fire( ) Reactive( ) Sudden
Release of Pressure( )
SARA 313 Components - 40 CFR 372.65
Section 313 Component(s) CAS Number
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ETHYLENE GLYCOL 107-21-1

MATERIAL SAFETY DATA SHEET
The Valvoline Company Page 011
Date Prepared: 10/30/06
Date Printed: 01/02/07
MSDS No: 503.0311762-003.001
578-2/578-3 ANTIFREEZE

International Regulations
Inventory Status
DSL (CANADA) The intentional ingredients of this product are
listed.
State and Local Regulations
California Proposition 65
None
New Jersey RTK Label Information
ETHYLENE GLYCOL 107-21-1
Pennsylvania RTK Label Information
1,2-ETHANEDIOL 107-21-1
ETHANOL, 2,2'-OXYBIS- 111-46-6

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16. OTHER INFORMATION
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.
NAPA Antifreeze & Coolant # 1GAL

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MATERIAL SAFETY DATA SHEET
Effective Date: 1-21-00 Revision Date: 7-22-02
NAPA Antifreeze & Coolant # 1GAL
Code: OWI Page: 1

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Section 1 - Product and Company Identification

PRODUCT NAME: Napa Antifreeze & Coolant # 1GAL

MANUFACTURER'S NAME: EMERGENCY TELEPHONE NUMBER
OLD WORLD INDUSTRIES, INC. (800)424-9300 CHEMTREC
4065 Commercial Avenue
Northbrook, IL 60062-1851 MISCELLANEOUS INFORMATION
(847)559-2000

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Section 2 - Hazardous Ingredients

MATERIAL CAS# % BY WT PEL (OSHA) TLV (ACGIH)

Ethylene Glycol 107-21-1 90-95 50 ppm 50 ppm
Diethylene Glycol 111-46-6 0-5 None None
Di Potassium Phosphate
7758-11-4 1-2 None None

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Section 3 - Hazards Indentification

Slight odor. May be fatal if swallowed. Vapors can cause eye irritation.

LOWEST KNOWN LD50 (ORAL) 107-21-1 5840 mg/kg
(Rats)
LOWEST KNOWN LD50 (SKIN) 107-21-1 9530 mg/kg
(Rabbits)

HAZARD RATING SYSTEM (NFPA)

HEALTH: 1 FLAMMABILITY: 1 REACTIVITY: 0

KEY: 0 - Minimal, 1 - Slight 2. Moderate 3. Serious
4.Severe

Product: Antifreeze/Coolant

POTENTIAL HEALTH EFFECTS

Routes of Exposure: Inhalation, Ingestion, Skin Contact/Absorption, Eye Contact

EYE: May cause slight transient (temporary) eye irritation. Corneal injury is unlikely. Vapors or mists may cause eye irritation.

SKIN: Prolonged or repeated exposure not likely to cause significant skin irritation. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts. Repeated skin exposure may result in absorption of harmful amounts. Massive contact with damaged skin or of material sufficiently hot to burn skin may result in absorption of potential lethal amounts.

INGESTION: Single dose oral toxicity is considered to be moderate. Excessive exposure may cause central nervous system effects, cardiopulmonary effects (metabolic acidosis), and kidney failure. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing amounts larger than that may cause serious injury, even death.

INHALATION: At room temperature, exposures to vapors are minimal due to physical properties; higher temperatures may generate vapor levels sufficient to cause adverse effects.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: Repeated excessive exposures may cause severe kidney and also liver gastrointestinal effects. Signs and symptoms of excessive exposure may be central nervous system effects. Signs

Section 3 - Hazards Indentification - Continued

and symptoms of excessive exposure may be nausea and/or vomiting. Signs and symptoms of excessive exposure may be anesthetic or narcotic effects. Observations in animals include formation of bladder stones after repeated oral doses of ethylene glycol. Reports of kidney failure and death in burn patients suggest the ethylene glycol may have been a factor. The use of topical applications containing this material may not be appropriate in severely burned patients or individuals with impaired renal function.

CANCER INFORMATION: Based on data from long-term animal studies, ethylene glycol is not believed to pose a carcinogenic risk to man.
TERATOLOGY (birth defects): Exposure to ethylene glycol has caused birth defects in laboratory animals only at doses toxic to the mother.

REPRODUCTIVE EFFECTS: Ethylene glycol has not interfered with reproduction in animal studies except at very high doses.

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Section 4 - First Aid Measures

Ensure physician has access to this MSDS.

Eyes: Immediately flush eyes with large amounts of water for 15 minutes, lifting lower and upper lids. Get medical attention as soon as possible. Contact lenses should never be worn when working with this chemical.

Skin: Flush area of skin contact immediately with large amounts of water for 15 minutes, while removing contaminated clothing. If irritation persists after flushing, get medical attention promptly. Wash clothing before re-use.

Inhalation: If inhaled, immediately remove victim to fresh air and call emergency medical care. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion: Obtain medical attention immediately. If patient is fully conscious, give two glasses of water. Do not induce vomiting. If medical advice is delayed, and if the person has swallowed a moderate volume of material (a few ounces), then give three to four ounces of hard liquor, such as whisky. For children, give proportionally less liquor, according to weight.

Section 5 - Firefighting Measures

FLAMMABLE PROPERTIES
FLASH POINT: 119/c (247/F)
METHOD USED: Setaflash
AUTOIGNITION TEMPERATURE: Autoignition temperature for ethylene glycol is 398/(C748/F).

FLAMMABILITY LIMITS - % of vapor concentration at which product can ignite in presence of spark. Lower Flammability Limit: 3.2%; Upper Flammability Limit: 15.3%.

HAZARDOUS COMBUSTION PRODUCTS: Hazardous combustion products may include and are not limited to carbon monoxide, carbon dioxide and trace amounts of aldehydes and organic acids. When available oxygen is limited, as in a fire or when heated to very high temperatures by a hot wire or plate, carbon monoxide and other hazardous compounds such as aldehydes might be generated.

EXTINGUISHING MEDIA: Water fog or fine spray. Alcohol resistant foams (ATC type) are preferred if available. General purpose synthetic foams (including AFFF) or protein foams may function, but much less effectively. Carbon dioxide. Dry chemical. Do not use direct water stream. May spread fire.

FIRE FIGHTING INSTRUCTIONS: No fire and explosion hazards expected under normal storage and handling conditions (i.e. ambient temperatures). However, ethylene glycol or solutions of ethylene glycol and water can form flammable vapors with air if heated sufficiently. Keep people away. Isolate fire area and deny unnecessary entry.

PROTECT EQUIPMENT FOR FIRE FIGHTERS: Wear positive-pressure, self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire-fighting helmet, coat, pants, boots, and gloves).

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Section 6 - Environmental Release Measures

PROTECT PEOPLE: Material is moderately toxic when ingested. Take adequate precautions to keep people, especially children away from spill site PVC-coated rubber gloves and monogoggles or faceshield can be used during cleanup of spill site.

Protect the environment: Do not dump used product or diluted material into sewers, on the ground, or into any body of water.

CLEANUP: Small spills - soak up with absorbent material. Large spills: Dike and pump into suitable containers for disposal. Ensure compliance with all applicable statues that require notification of appropriate government officials

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Section 7 - Handling and Storage

Product on surfaces can cause slippery conditions. Practice reasonable care and cleanliness. Avoid breathing spray mists if generated. Keep out of reach of children. Product may become a solid at temperatures below: -22 C (-8 F). Do not store near food, foodstuffs, drugs or potable water supplies.

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Section 8 - Exposure Controls/Personal Protection

Respiratory Respiratory protection is required if airborne concentration exceeds Protection:TLV. At any detectable concentration, any self-contained breathing apparatus with a full facepiece and operated in a pressure-demand or other positive pressure mode or any supplied-air respirator with a full facepiece and operated in a pressure-demand or other positive pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive
pressure mode.

Escape: Any air-purifying full facepiece respirator (gas mask) with a chin-style or front or back-mounted organic vapor canister or any appropriate escape-type self contained breathing apparatus.

Skin Protection: Protective gloves recommended when prolonged skin contact can not be avoided. Polyethylene; Neoprene; nitrile; Polyvinyl alcohol; Natural Rubber, Butyl Rubber, Safety shower should be available.

Eye Protection: Safety goggles and face shield. Emergency eyewash should be available. Contact lenses should not be worn when working with this chemical.

Engineering Controls: Use general or local exhaust ventilation to meet TLV

requirements.

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Section 9 - Physical and Chemical Properties

Boiling Range: 171 -175 C (339-348F)
Freeze Point: -18C (0F)
Specific Gravity (Water =1 1.12
Pounds/Gallons 9.3
Vapor Pressure (mm Hg) @ 20C <0.1
Vapor Density 2.1
Water Solubility: Complete
Evaporation Rate (BuAc=1): Nil
% Volatile by Volume: 97.0
Appearance Green
Odor: Mild

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Section 10 - Stability and Reactivity

STABILITY: Stable
CONDITIONS TO AVOID: Isolate from oxidizers, heat &
open flame
MATERIALS TO AVOID: Isolate from strong oxidizers
such as permanganates,
chromates & peroxides
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide from
burning.
HAZARDOUS POLYMERIZATION: Material is not known to polymerize.

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Section 11 - Toxicological Information

SKIN: The dermal LD50 hasb not been determined

INGESTION: The lethal dose in humans is estimated to be 100 m (3
ounces). The oral LD50 for rats is in the 6000 13,000 mg/kg range.

MUTAGENICITY (THE EFFECTS ON GENETIC MATERIAL): In vitro mutagenicity
studies were negative. Animal mutagenicity studies were negative

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Section 12 - Ecological Information

ENVIRONMENTAL FATE

MOVEMENT & PARTITIONING: Bioconcentration potential is low (BCF less than 100 or Log Kow less than 3). Log octanol/water partition coefficient (log Know) is 1.36. Henry's Law Constant (H) is 6.OE-08 arm-m3/mol. Bioconcentration factor (BCF) is 10 in golden orfe.

DEGRADATION & TRANSFORMATION: Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD GREATER THAN 40%). 5-Day biochemical oxygen demand (BOD5) is 0.78p/p. 10-Day biochemical oxygen demand (BOD10) is 1.06 p/p. 20-Day biochemical oxygen demand (BOD20) is 1.15 p/p. Theoretical oxygen demand (ThOD) is calculated to be 1.29 p/p. Biodegradation may occur under both aerobic and anaerobic conditions (in either the presence or absence of oxygen). Inhibitory concentration (IC50) in OECD " Activated Sludge, Respiration Inhibition Test" (Guideline # 209) is < 1000 mg/L. Degradation is expected in the atmospheric environment within days to weeks.

ECOTOXICOLOGY: Material is practically non-toxic to aquatic organisms on an acute basis (LC50 greater than 100 mg/L in most sensitive species). Acute LC50 for fathead minnow (Pimephales promelas) is 51000 mg/L. Acute LC 50 for bluegil (Lepomis macrochirus) is 27549 mg/L. Acute LC50 for rainbow trout (Oncorhynchus mykiss) is about 18000-46000 mg/L. Acute LC50 for guppy (Poecilia reticulata) is 49300 mg/L. Acute LC50 for water flea (Daphnia magna) is 46300-51100 mg/L. Acute LC50 for the cladoceran Ceriodaphnia dubia is 10000-25800 mg/L. Acute LC50 for crayfish is 91430 mg/L. Acute LC50 for brine shrimp (Artemia salina) is 20000 mg/L. Acute LCC 50 for golden orfe (Leueiscus idus) is greater than 10000 mg/L. Acute LC50 for goldfish (Carassius auratus) is greater than 5000 mg/L.

Growth inhibition EC50 for green alga Selenastrum capricornutum is 9500-13000 mg/L.

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Section 13 - Disposal Considerations

DO NOT discharge to sewer. Wear appropriate personal protection. Take up with sand, vermiculite, or similar inert material. Dispose in accordance wilth federal, state and local regulations.

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Section 14 - Transport Information

US DOT Ethylene Glycol
NON-BULK
Proper Shipping Name: Environmentally Hazardous Material
Liquid N.O.S. (Ethylene Glycol) BULK
Proper Shippinng Name: Ethylene Glycol
UN3082
9
PG III

Technical Name: 5,000 lb.

Section 15 - Regulatory Information

THIS PRODUCT CONTAINS COMPONENT(S) CITED ON THE FOLLOWING REGULATIONS.

CHEMICAL NAME CAS NUMBER

Ethylene Glycol 107-21-1

UNITED STATES
TSCA - Inventory: Listed

WATER STANDARDS: No data available

ATMOSPHERIC Clean Air Act (1990) - List of Hazardous Air Contaminants: listed
STANDARDS:

CERCLA: Reportable Quantity (RQ): 5,000 pounds (532 gallons)

SARA Title III: Section 311/312 - Categories: Acute hazard; chronic hazard

Section 312 - Inventory Reporting: Ethylene glycol is subject to Tier I and/or Tier II annual inventory reporting.

Section 313 - Emission Reporting: Ethylene glycol is subject to Form R reporting requirements.

Section 302 - Extremely Hazardous Substances:
Ethylene glycol is = not listed.

STATE RIGHT-TO-KNOW:

California - Exposure Limits - Ceilings: vapor-50 ppm ceiling; 125 mg/m3 ceiling
Director's List of Hazardous Substances: listed
Florida - Hazardous Substances List: listed
Massachusetts - Right-To-Know List: listed
Minnesota - Haz. Subs. List: listed (particulate and vapor)
New Jersey - Right-To-Know List (Total): Present greater than 1.0%
Pennsylvania Right-To-Know List: environmental hazard

CANADIAN REGULATIONS:

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.

WHMIS INFORMATION: D2A - material has potential toxic effects. Refer elsewhere in the MSDS for the specific warnings and safe handling information. Refer to the employer's workplace education program.

Section 16 - Other Information

California Proposition 65

This product contains the following chemicals known to the State of California to cause cancer:
Component CAS # Amount
1,4-Dioxane 123-91-1 <=0.0086%
Acetaldehyde 75-07-0 <=0.1000ppm

This contains the following chemical known to the State of California to cause birth defects and/or other reproductive harm.
Component CAS # Amount
Ethylene glycol monomethyl ether
109-86-4 <=0,0009%
California SCAQMD Rule 443.1 (South Coast Air Quality Management District Rule 443.1, Labeling of Materials Containing Organic Solvents)

Contact: Thomas Cholke Phone: (847) 559-2000

Old World Industries, Inc. makes no warranty, representation or guarantee as to the accuracy, sufficiency or completeness of the material set forth herein. It is the user's responsibility to determine the safety, toxicity and suitability of his own use, handling and disposal of this product. Since actual use by others is beyond our control, no warranty, expressed or implied, is made by Old World Industries, Inc. as the effects of such use, the results to be obtained or the safety and toxicity of this product, nor does Old World Industries, Inc. assume liability arising out of the use by others of this product referred to herein. The data in this MSDS relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ FUEL INJECTOR CLEANER

Recommended use of the chemical and restrictions on use

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

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids : Category 3

Skin irritation : Category 2

Specific target organ systemic toxicity - single exposure : Category 3 (Central nervous system)

Aspiration hazard : Category 1

GHS Label element

Hazard pictograms :

Signal Word : Danger

Hazard Statements : Flammable liquid and vapor.
May be fatal if swallowed and enters airways.
Causes skin irritation.
May cause drowsiness or dizziness.

Precautionary Statements : **Prevention:**

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.
Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/ eye protection/ face protection.
Response:
IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
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. Call a POISON CENTER or doctor/ physician if you feel unwell.
Do NOT induce vomiting.
If skin irritation occurs: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam 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 to an approved waste disposal plant.

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

Hazardous components

Chemical Name	CAS-No.	Classification	Concentration (%)
KEROSENE	8008-20-6	Flam. Liq. 3; H226 Skin Irrit. 2; H315 STOT SE 3; H336 Asp. Tox. 1; H304	97.22

SECTION 4. FIRST AID MEASURES

General advice	:	Move out of dangerous area. Call a POISON CENTRE or doctor/physician if exposed or you feel unwell. Show this safety data sheet to the doctor in attendance. Symptoms of poisoning may appear several hours later. Do not leave the victim unattended.
If inhaled	:	Move to fresh air. If unconscious place in recovery position and seek medical advice. Consult a physician after significant exposure.
In case of skin contact	:	Remove contaminated clothing. If irritation develops, get medical attention. If on skin, rinse well with water. Wash contaminated clothing before re-use. If on clothes, remove clothes.
In case of eye contact	:	Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. If eye irritation persists, consult a specialist.
If swallowed	:	Obtain medical attention. Do NOT induce vomiting. 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	:	Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material. Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea) irritation (nose, throat, airways) Lung irritation confusion irregular heartbeat Convulsions May be fatal if swallowed and enters airways. Causes skin irritation. May cause drowsiness or dizziness.

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.
Water spray
Foam
Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting : Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Aldehydes
carbon dioxide and carbon monoxide
Hydrocarbons
Nitrogen oxides (NOx)
sulfur oxides

Specific extinguishing methods :

Product is compatible with standard fire-fighting agents.

Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Use a water spray to cool fully closed containers.

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 : Evacuate personnel to safe areas.
Remove all sources of ignition.
Use personal protective equipment.
Ensure adequate ventilation.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and 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).

Other information : Comply with all applicable federal, state, and local regulations.
Suppress (knock down) gases/vapours/mists with a water spray jet.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Open drum carefully as content may be under pressure.
Avoid formation of aerosol.
Provide sufficient air exchange and/or exhaust in work rooms.
Do not breathe vapours/dust.
Do not smoke.
Container hazardous when empty.
Take precautionary measures against static discharges.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Observe label precautions.
No smoking.
Electrical installations / working materials must comply with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of	Control parameters /	Basis

		exposure)	Permissible concentration	
KEROSENE	8008-20-6	TWA	200 mg/m3 Non-aerosol (as total hydrocarbon vapor)	ACGIH
		REL	100 mg/m3	NIOSH/GUIDE

Engineering measures : 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 : In the case of vapour formation use a respirator with an approved filter.

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. 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 not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

Hand protection
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

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:
impervious clothing
Safety shoes
Flame-resistant clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Discard gloves that show tears, pinholes, or signs of wear.
Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : Wash hands before breaks and at the end of workday.
When using do not eat or drink.
When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	:	liquid
Colour	:	amber
Odour	:	pungent
Odour Threshold	:	No data available
pH	:	No data available
	:	No data available
Boiling point/boiling range	:	347 °F / 175 °C Calculated Phase Transition Liquid/Gas
Flash point	:	120.00 °F / 48.89 °C Calculated Flash Point
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit	:	5 %(V) GLP: Calculated Explosive Limit
Lower explosion limit	:	0.7 %(V) GLP: Calculated Explosive Limit
Vapour pressure	:	0.63994 hPa (20 °C) Calculated Vapor Pressure
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	0.8023 g/cm3 (15.56 °C)
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	:	No data available

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 : Vapours may form explosive mixture with air.

Conditions to avoid : Heat, flames and sparks.

excessive heat

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products

carbon dioxide and carbon monoxide
Hydrocarbons
Nitrogen oxides (NOx)
Sulphur oxides

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:
KEROSENE:

Acute oral toxicity : LD 50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 420

Acute inhalation toxicity : LC 50 (Rat): > 5.28 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403
Assessment: Not classified as acutely toxic by inhalation under GHS.

Acute dermal toxicity : LD 50 (Rabbit): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: Not classified as acutely toxic by dermal absorption under GHS.

Skin corrosion/irritation
Causes skin irritation.
Product:
Remarks: May cause skin irritation and/or dermatitis.

Result: Repeated exposure may cause skin dryness or cracking.

Components:
KEROSENE:
Result: Irritating to skin

Serious eye damage/eye irritation
Not classified based on available information.
Product:
Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin.

Components:
KEROSENE:
Result: Slightly 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
May cause drowsiness or dizziness.
Components:
KEROSENE:
Assessment: May cause drowsiness or dizziness.

STOT - repeated exposure
Not classified based on available information.
Aspiration toxicity
May be fatal if swallowed and enters airways.
Product:
May be fatal if swallowed and enters airways.

Components:
KEROSENE:
May be fatal if swallowed and enters airways.

Further information
Product:
Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting., Concentrations substantially above the TLV value may cause narcotic effects., Solvents may degrease the skin.

Components:

KEROSENE:
Remarks: Skin

Remarks: Central nervous system

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:
KEROSENE:

Toxicity to fish	:	LL50 (Oncorhynchus mykiss (rainbow trout)): 2 - 5 mg/l Exposure time: 96 h Test Type: semi-static test Test substance: WAF Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Water flea (Daphnia magna)): 1.4 mg/l Exposure time: 48 h Test Type: static test Test substance: WAF Method: OECD Test Guideline 202
Toxicity to algae	:	EL50 (Pseudokirchneriella subcapitata (green algae)): 1 - 3 mg/l Exposure time: 72 h Test Type: static test Test substance: WAF Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	(Water flea (Daphnia magna)): 0.89 mg/l Exposure time: 21 d End point: Reproduction Test Test Type: semi-static test Test substance: WAF Method: OECD Test Guideline 211

Persistence and degradability

Components:

KEROSENE:

Biodegradability : Biodegradation: 58.6 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Bioaccumulative potential

Components:

No data available

Mobility in soil

Components:

No data available

Other adverse effects

No data available

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic to aquatic life with long lasting effects.

Components:

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

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

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International transport regulations

REGULATION

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

MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

UN	1993	Not dangerous goods	3	

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN	1993	Not dangerous goods	3	

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN	1993	Not dangerous goods	3	

INTERNATIONAL MARITIME DANGEROUS GOODS

UN	1993	Not dangerous goods	3	

TRANSPORT CANADA - INLAND WATERWAYS

	Not dangerous goods

TRANSPORT CANADA - RAIL

	Not dangerous goods

TRANSPORT CANADA - ROAD

	FLAMMABLE LIQUID, N.O.S.	III	LIMITED QUANTITY

U.S. DOT - INLAND WATERWAYS

	Flammable liquid, n.o.s.	III

U.S. DOT - RAIL

	Flammable liquid, n.o.s.	III

U.S. DOT - ROAD

	LIQUIDO INFLAMABLE, N.E.P.	III

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

Marine pollutant		yes

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

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
NAPHTHALENE	91-20-3	100	214132.762313

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard

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.

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 : Not in compliance with the inventory

KECL : On the inventory, or in compliance with the inventory

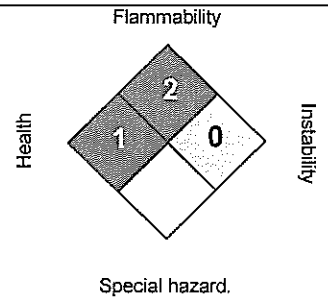
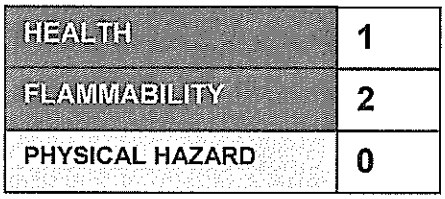
PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

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: 05/22/2015

NFPA:	HMIS III:
	 0 = not significant, 1 =Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic

NFPA Flammable and Combustible Liquids Classification
Combustible Liquid Class II

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

H226	Flammable liquid and vapor.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.

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

Safety Data Sheet

Material Name: Hess 5W30 Motor Oil

SDS No. 9683
US GHS

Synonyms: Valvoline Product Code 52670453

* * * Section 1 - Product and Company Identification * * *

Manufacturer Information

Hess Corporation
1 Hess Plaza
Woodbridge, NJ 07095-0961

Phone: 732-750-6000 Corporate EHS
Emergency # 800-424-9300 CHEMTREC
www.hess.com (Environment, Health, Safety Internet Website)

* * * Section 2 - Hazards Identification * * *

GHS Classification:

Skin Corrosion/Irritation – Category 2
Specific Target Organ Toxicity – Category 3 (narcosis)
Carcinogenicity - Category 1B

GHS LABEL ELEMENTS

Symbol(s)

Signal Word

WARNING

Hazard Statements

Causes skin irritation.
May cause cancer.
May cause drowsiness or dizziness.

Precautionary Statements

Prevention

Wash hands and forearms thoroughly after handling.
Wear protective gloves/protective clothing/eye protection.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing fume/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.

Response

If on skin: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.
If exposed or concerned: Get medical advice/attention.
If inhaled: Remove person to fresh air and keep in a position comfortable for breathing. Call poison center or doctor if you feel unwell.

Storage
Store locked up.
Store in a well-ventilated place.
Keep container tightly closed.

Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS #	Component	Percent
64742-65-0	Petroleum distillates, solvent dewaxed heavy paraffinic	83-93

Petroleum-based lubricating oil with detergent/dispersant engine oil package with zinc compounds.

* * * Section 4 - First Aid Measures * * *

First Aid: Eyes
If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is visual difficulty, seek medical attention.

First Aid: Skin
Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

First Aid: Ingestion
Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

First Aid: Inhalation
Remove person to fresh air. If person is not breathing provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

First Aid: Notes to Physician
Acute aspiration of large amounts of oil-laden material may produce a serious aspiration hazard. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration 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. Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin.

* * * Section 5 - Fire Fighting Measures * * *

General Fire Hazards
See Section 9 for Flammability Properties.
Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. No special fire hazards are known to be associated with this product. Dense smoke may be generated while burning.

Hazardous Combustion Products

May form: carbon dioxide and carbon monoxide, oxides of sulfur, nitrogen and phosphorous, various hydrocarbons.

Extinguishing Media

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray, fire fighting foam, or gaseous extinguishing agent.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

Unsuitable Extinguishing Media

None

Fire Fighting Equipment/Instructions

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment. Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing. Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

* * * Section 6 - Accidental Release Measures * * *

Recovery and Neutralization

Carefully contain and stop the source of the spill, if safe to do so.

Materials and Methods for Clean-Up

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal. Caution, flammable vapors may accumulate in closed containers.

SMALL SPILL: Absorb liquid on vermiculite, floor absorbent or other absorbent material. Persons not wearing proper personal protective equipment should be excluded from area of spill.

LARGE SPILL: Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify authorities as required, that a spill has occurred. Persons not wearing proper personal protective equipment should be excluded from area of spill until clean-up has been completed.

Emergency Measures

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Personal Precautions and Protective Equipment

Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

Environmental Precautions

Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Prevention of Secondary Hazards

None

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Handle as a combustible liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil) is loaded into tanks previously containing low flash point products (such as this product) - see API Publication 2003, "Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents.

Storage Procedures

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks."

Incompatibilities

Avoid contact with: acids, halogens, strong oxidizing agents.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Component Exposure Limits

ACGIH, OSHA, and NIOSH have not developed exposure limits for any of this product's components.

Engineering Measures

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

Personal Protective Equipment: Respiratory

A NIOSH/MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

Personal Protective Equipment: Hands

Not normally required. However, wear resistant gloves such as nitrile rubber to prevent irritation which may result from prolonged or repeated skin contact with product.

Personal Protective Equipment: Eyes

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

Personal Protective Equipment: Skin and Body

To prevent repeated or prolonged skin contact, wear impervious clothing and boots. Wear normal work clothing covering arms and legs.

Hygiene Measures

Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance:	Dry, clear and bright	**Odor:**	None
Physical State:	Liquid	**pH:**	ND
Vapor Pressure:	ND	**Vapor Density:**	ND
Boiling Point:	>425 °F (218.3°C) @ 760.00 mmHg	**Melting Point:**	ND
Solubility (H2O):	Negligible	**Specific Gravity:**	0.876 @ 60°F (16°C)
Evaporation Rate:	Slower than ethyl ether	**VOC:**	ND
Viscosity:	<= 3300.0 cps @ -25°C; 10.5 - 11.2 cst @ 100°C	**Octanol/H2O Coeff.:**	ND
Flash Point:	410 °F (210.0 °C)	**Flash Point Method:**	COC
Upper Flammability Limit (UFL):	ND	**Lower Flammability Limit (LFL):**	ND
Burning Rate:	ND	**Auto Ignition:**	ND

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Chemical Stability

This is a stable material.

Hazardous Reaction Potential

Will not occur.

Conditions to Avoid

None

Incompatible Products

Avoid contact with: acids, halogens, strong oxidizing agents.

Hazardous Decomposition Products

May form: aldehydes, carbon dioxide and carbon monoxide, hydrogen sulfide, oxides of sulfur, nitrogen and phosphorus, toxic fumes, various hydrocarbons.

* * * Section 11 - Toxicological Information * * *

Acute Toxicity

A: General Product Information

Harmful if large amounts are swallowed.

B: Component Analysis - LD50/LC50

Petroleum distillates, solvent dewaxed heavy paraffinic (64742-65-0)

Inhalation LC50 Rat >4.7 mg/L 4 h; Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >5000 mg/kg

Potential Health Effects: Skin Corrosion Property/Stimulativeness

May cause mild skin irritation. Prolonged or repeated contact may dry the skin. Symptoms include redness, burning, drying and cracking of the skin, and skin burns. Additional symptoms of skin contact include: acne. Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects during safe handling and use.

Potential Health Effects: Eye Critical Damage/ Stimulativeness

May cause mild eye irritation. Symptoms include stinging, tearing, and redness.

Potential Health Effects: Ingestion

Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful.

Potential Health Effects: Inhalation

It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms usually occur at air concentrations higher than the recommended exposure limits.

Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any skin sensitization effects.

Generative Cell Mutagenicity

This product is not reported to have any mutagenic effects.

Carcinogenicity

A: General Product Information

May cause cancer.

Used motor oil has been shown to cause skin cancer in laboratory animal continually exposed by repeated applications.

B: Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

Reproductive Toxicity

This product is not reported to have any reproductive toxicity effects.

Specified Target Organ General Toxicity: Single Exposure

This product is not reported to have any specific target organ general toxicity single exposure effects.

Specified Target Organ General Toxicity: Repeated Exposure

This product is not reported to have any specific target organ general toxicity repeat exposure effects.

Aspiration Respiratory Organs Hazard

Acute aspiration of large amounts of oil-laden material may produce a serious aspiration hazard.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

A: General Product Information

Keep out of sewers, drainage areas and waterways. Report spills and releases, as applicable, under Federal and State regulations.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Petroleum distillates, solvent dewaxed heavy paraffinic (64742-65-0)

Test & Species	Conditions
96 Hr LC50 Oncorhynchus mykiss	>5000 mg/L
48 Hr EC50 Daphnia magna	>1000 mg/L

Persistence/Degradability

No information available.

Bioaccumulation

No information available.

Mobility in Soil

No information available.

* * * Section 13 - Disposal Considerations * * *

Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 14 - Transportation Information * * *

DOT Information

Shipping Name: Not Regulated

* * * Section 15 - Regulatory Information * * *

Regulatory Information

Component Analysis

None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

SARA Section 311/312 – Hazard Classes

Acute Health	Chronic Health	Fire	Sudden Release of Pressure	Reactive
X	X	--	--	--

SARA SECTION 313 - SUPPLIER NOTIFICATION

ZINC C1-C14 ALKYLDITHIOPHOSPHATE (CAS No. 68649-42-3)

State Regulations

Component Analysis - State

None of this product's components are listed on the state lists from CA, MA, MN, NJ, PA, or RI.

Component Analysis - WHMIS IDL

No components are listed in the WHMIS IDL.

Additional Regulatory Information

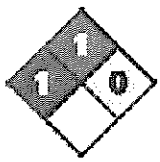
Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Petroleum distillates, solvent dewaxed heavy paraffinic	64742-65-0	Yes	DSL	EINECS

* * * Section 16 - Other Information * * *

NFPA® Hazard Rating

Health	1
Fire	1
Reactivity	0



HMIS® Hazard Rating

Health	1*	Slight
Fire	1	Slight
Physical	0	Minimal
		*Chronic

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.

Literature References

None

Other Information

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

End of Sheet

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ Maxlife™ SAE 10W30 HIGH MILEAGE MOTOR OIL
™ Trademark, Ashland or its subsidiaries, registered in various countries

Recommended use of the chemical and restrictions on use

Details of the supplier of the safety data sheet	**Emergency telephone number**
Ashland P.O. Box 2219 Columbus, OH 43216 United States of America EHS Customer Requests@ashland.com	1-800-ASHLAND (1-800-274-5263) **Regulatory Information Number** 1-800-325-3751 **Product Information** 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	64742-54-7	Asp. Tox. 1; H304	12.18

DISTILLATE			
ZINC DIALKYL DITHIOPHOSPHATE	68649-42-3	Skin Irrit. 2; H315 Aquatic Acute 2; H401 Aquatic Chronic 2; H411	1.08

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 : Remove contaminated clothing. If irritation develops, get medical attention.
If on skin, rinse well with water.
Wash contaminated clothing before re-use.

In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
If eye irritation persists, consult a specialist.

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.
Water spray
Foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media : High volume water jet

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
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 : Use personal protective equipment.
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).
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 : Avoid contact with skin and eyes.
Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Electrical installations / working materials must comply with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Engineering measures : 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
Hand protection
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

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:
impervious clothing
Safety shoes
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : Wash hands before breaks and at the end of workday.
When using do not eat or drink.
When using do not smoke.

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	:	> 424 °F / > 218 °C (1013 hPa)
Flash point	:	> 390 °F / > 199 °C Method: Cleveland open cup
Evaporation rate	:	< 1
Flammability (solid, gas)	:	No data available
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapour pressure	:	< 1.0 mmHg (20 °C)
Relative vapour density	:	> 1AIR=1
Relative density	:	No data available
Density	:	0.8687 g/cm3 (15.6 °C)
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	:	ca. 70 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 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

ZINC DIALKYL DITHIOPHOSPHATE:

Acute oral toxicity	:	LD 50 (Rat): > 2,000 - 5,000 mg/kg
Acute dermal toxicity	:	LD 50 (Rabbit): > 2,000 mg/kg Assessment: Not classified as acutely toxic by dermal absorption under GHS.

Skin corrosion/irritation
Not classified based on available information.
Product:
Result: Mildly irritating to skin

Result: Repeated exposure may cause skin dryness or cracking.

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

ZINC DIALKYL DITHIOPHOSPHATE:
Result: Irritating to skin

Serious eye damage/eye irritation
Not classified based on available information.
Product:
Result: Slightly irritating to eyes
Remarks: Expected based on components.

Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin.

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

ZINC DIALKYL DITHIOPHOSPHATE:
Result: Possibly 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

ZINC DIALKYL DITHIOPHOSPHATE:

Ecotoxicology Assessment	
Acute aquatic toxicity	: Toxic to aquatic life.
Chronic aquatic toxicity	: Toxic to aquatic life with long lasting effects.

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 : Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

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

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

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)

ZINC DIALKYL DITHIOPHOSPHATE	68649-42-3	1.08 %
PHOSPHORODITHIOIC ACID, MIXED O,O-BIS(1,3-DIMETHYLBUTYL AND ISO-PR) ESTERS, ZINC SALTS	84605-29-8	0.53 %

Pennsylvania Right To Know

HEAVY PARAFFINIC DISTILLATE	64742-54-7	50.00 - 70.00 %
HYDROTREATED HEAVY PARAFFINIC BASE OIL	64742-54-7	10.00 - 20.00 %
HEAVY PARAFFINIC DISTILLATE	64742-54-7	10.00 - 20.00 %
LUBRICANT ADDITIVE	Not Assigned	5.00 - 10.00 %

New Jersey Right To Know

HEAVY PARAFFINIC DISTILLATE	64742-54-7	50.00 - 70.00 %
HYDROTREATED HEAVY PARAFFINIC BASE OIL	64742-54-7	10.00 - 20.00 %
HEAVY PARAFFINIC DISTILLATE	64742-54-7	10.00 - 20.00 %
LUBRICANT ADDITIVE	Not Assigned	5.00 - 10.00 %
ZINC DIALKYL DITHIOPHOSPHATE	68649-42-3	1.00 - 5.00 %
DINONYL DIPHENYLAMINE	36878-20-3	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 : Not 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

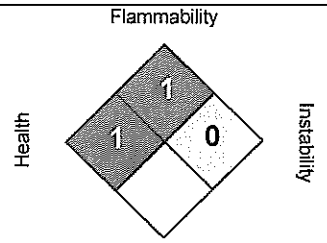
IECSC : q (quantity restricted)

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: 06/02/2015

NFPA:	HMIS III:
	HEALTH 1 FLAMMABILITY 1 PHYSICAL HAZARD 0 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.

H303	May be harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H313	May be harmful in contact with skin.
H315	Causes skin irritation.

Further information

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

Valvoline Typed on gave me this

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : NEXTGEN MAXLIFE SAE 10W-30 MOTOR OIL

Recommended use of the chemical and restrictions on use

Details of the supplier of the safety data sheet	**Emergency telephone number**
Ashland P.O. Box 2219 Columbus, OH 43216 United States of America EHS Customer Requests@ashland.com	1-800-ASHLAND (1-800-274-5263) **Regulatory Information Number** 1-800-325-3751 **Product Information** 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 (%)
RESIDUAL OILS (PETROLEUM), SOLVENT-DEWAXED	64742-62-7	Not a hazardous substance or mixture.	7.82
ZINC DIALKYL	68649-42-3	Skin Irrit. 2; H315	1.08

DITHIOPHOSPHATE		Aquatic Acute 2; H401 Aquatic Chronic 2; H411	

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	:	Remove contaminated clothing. If irritation develops, get medical attention. If on skin, rinse well with water. Wash contaminated clothing before re-use.
In case of eye contact	:	Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. If eye irritation persists, consult a specialist.
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	:	Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea) irritation (nose, throat, airways) Dizziness
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. Water spray Foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing media	:	High volume water jet
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 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	:	Use personal protective equipment. 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). 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	:	Avoid contact with skin and eyes. Smoking, eating and drinking should be prohibited in the application area. For personal protection see section 8. Dispose of rinse water in accordance with local and national regulations.
Conditions for safe storage	:	Keep container tightly closed in a dry and well-ventilated place. Electrical installations / working materials must comply with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
RESIDUAL OILS (PETROLEUM), SOLVENT-DEWAXED	64742-62-7	PEL	500 ppm 2,000 mg/m3	OSHA_TRANS
		REL	5 mg/m3 Mist.	NIOSH/GUIDE
		STEL	10 mg/m3 Mist.	NIOSH/GUIDE
		PEL	5 mg/m3 Mist.	OSHA_TRANS

Engineering measures : 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

Hand protection
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

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:
impervious clothing
Safety shoes
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : Wash hands before breaks and at the end of workday.
When using do not eat or drink.
When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : liquid

Odour : No data available

Odour Threshold : No data available

pH	:	No data available
Melting point/freezing point	:	No data available
Boiling point/boiling range	:	599 °F / 315 °C 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	:	7 %(V) GLP: Calculated Explosive Limit
Lower explosion limit	:	0.9 %(V) GLP: Calculated Explosive Limit
Vapour pressure	:	0.1333333 hPa (20 °C) Calculated Vapor Pressure
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	0.867 g/cm3 (20 °C)
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	:	No data available
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

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:
RESIDUAL OILS (PETROLEUM), SOLVENT-DEWAXED:

Acute oral toxicity	:	LD 50 (Rat): > 5,000 mg/kg LD 50 (Rat): > 5 g/kg
Acute inhalation toxicity	:	LC50 (Rat): > 5.58 mg/l Exposure time: 4 h Test atmosphere: dust/mist Assessment: Not classified as acutely toxic by inhalation under GHS. Remarks: No mortality observed at this dose.
Acute dermal toxicity	:	LD 50 (Rabbit): > 5,000 mg/kg Remarks: No mortality observed at this dose. LD 50 (Rabbit): > 2,000 mg/kg Assessment: Not classified as acutely toxic by dermal absorption under GHS.

ZINC DIALKYL DITHIOPHOSPHATE:

Acute oral toxicity	:	LD 50 (Rat): > 2,000 - 5,000 mg/kg
Acute dermal toxicity	:	LD 50 (Rabbit): > 2,000 mg/kg Assessment: Not classified as acutely toxic by dermal absorption under GHS.

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

Components:

RESIDUAL OILS (PETROLEUM), SOLVENT-DEWAXED:
Species: Rabbit
Result: Not irritating to skin

ZINC DIALKYL DITHIOPHOSPHATE:
Result: Irritating to skin

Serious eye damage/eye irritation
Not classified based on available information.
Product:
Result: Slightly irritating to eyes
Remarks: Expected based on components.

Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin.

Components:
RESIDUAL OILS (PETROLEUM), SOLVENT-DEWAXED:
Species: Rabbit
Result: Not irritating to eyes

ZINC DIALKYL DITHIOPHOSPHATE:
Result: Possibly irritating to eyes

Respiratory or skin sensitisation
Skin sensitisation: Not classified based on available information.
Respiratory sensitisation: Not classified based on available information.
Components:
RESIDUAL OILS (PETROLEUM), SOLVENT-DEWAXED:
Test Type: Buehler Test
Species: Guinea pig
Assessment: Does not cause skin sensitisation.

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.
Components:
RESIDUAL OILS (PETROLEUM), SOLVENT-DEWAXED:
No aspiration toxicity classification

Further information
Product:
Remarks: No data available

Carcinogenicity:
IARC Group 1: Carcinogenic to humans

	RESIDUAL OILS (PETROLEUM), SOLVENT-DEWAXED 64742-62-7
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	Known to be human carcinogen
	RESIDUAL OILS (PETROLEUM), SOLVENT-DEWAXED 64742-62-7

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

RESIDUAL OILS (PETROLEUM), SOLVENT-DEWAXED:

Toxicity to fish	:	LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l Exposure time: 96 h Test Type: static test Test substance: WAF Method: OECD Test Guideline 203 Remarks: No toxicity at the limit of solubility
Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Daphnia magna (Water flea)): > 10,000 mg/l Exposure time: 48 h Test Type: static test Test substance: WAF Method: OECD Test Guideline 202
Toxicity to algae	:	NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l End point: Growth inhibition Exposure time: 72 h Test Type: static test Test substance: WAF Method: OECD Test Guideline 201
Toxicity to fish (Chronic toxicity)	:	NOELR (Oncorhynchus mykiss (rainbow trout)): Calculated >= 1,000 mg/l Exposure time: 14 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEL (Daphnia (water flea)): 10 mg/l Exposure time: 21 d Test substance: WAF Method: OECD Test Guideline 211

ZINC DIALKYL DITHIOPHOSPHATE:
Ecotoxicology Assessment
Acute aquatic toxicity : Toxic to aquatic life.

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Persistence and degradability

Components:

RESIDUAL OILS (PETROLEUM), SOLVENT-DEWAXED:
Biodegradability : Result: Not readily biodegradable.
Biodegradation: 2 - 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

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 : Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

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

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International transport regulations

REGULATION

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

MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

TRANSPORT CANADA - INLAND WATERWAYS

Not dangerous goods

TRANSPORT CANADA - RAIL

Not dangerous goods

TRANSPORT CANADA - ROAD

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

U.S. DOT - RAIL

Not dangerous goods

U.S. DOT - ROAD

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)

ZINC DIALKYL DITHIOPHOSPHATE	68649-42-3	1.08 %
PHOSPHORODITHIOIC ACID, MIXED O,O-BIS(1,3-DIMETHYLBUTYL AND ISO-PR) ESTERS, ZINC SALTS	84605-29-8	0.53 %

Pennsylvania Right To Know

HEAVY PARAFFINIC DISTILLATE	64742-54-7	70.00 - 90.00 %
LUBRICANT ADDITIVE	Not Assigned	5.00 - 10.00 %
RESIDUAL OILS (PETROLEUM), SOLVENT-DEWAXED	64742-62-7	5.00 - 10.00 %

New Jersey Right To Know

HEAVY PARAFFINIC DISTILLATE	64742-54-7	70.00 - 90.00 %
LUBRICANT ADDITIVE	Not Assigned	5.00 - 10.00 %
RESIDUAL OILS (PETROLEUM), SOLVENT-DEWAXED	64742-62-7	5.00 - 10.00 %
ZINC DIALKYL DITHIOPHOSPHATE	68649-42-3	1.00 - 5.00 %
DINONYL DIPHENYLAMINE	36878-20-3	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 : Not in compliance with the inventory

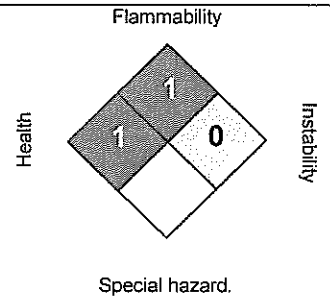
ENCS	:	Contact your sales representative for additional information.
KECL	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	q (quantity restricted)

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: 05/22/2015

NFPA:



HMIS III:

HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARD	0

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.

H315	Causes skin irritation.
H401	Toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

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

SAFETY DATA SHEET

1. Identification

Product identifier	**MERCON® V Automatic Transmission and Power Steering Fluid**
Other means of identification	
FIR No.	184629
Recommended use	Fill for automatic transmissions and power steering systems requiring MERCON V® fluid
Recommended restrictions	None known.

Manufacturer/Importer/Supplier/Distributor information

Supplier

Company Name	Ford Motor Company
Address	Attention: MSDS Information, P.O. Box 1899 Dearborn, Michigan 48121 USA
Telephone	1-800-392-3673
MSDS Information	1-800-448-2063 msds@brownart.com
Emergency telephone numbers	
	Poison Control Center: USA and Canada: 1-800-959-3673 INFOTRAC (Transportation): USA and Canada 1-800-535-5053

2. Hazard(s) identification

Physical hazards	Not classified.
Health hazards	Not classified.
Environmental hazards	Not classified.
OSHA defined hazards	Not classified.
Label elements	
Hazard symbol	None.
Signal word	None.
Hazard statement	The mixture does not meet the criteria for classification.
Precautionary statement	
Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC)	May cause irritation of respiratory tract. May irritate eyes and skin. May cause an allergic skin reaction.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

The manufacturer lists no ingredients as hazardous according to OSHA 29 CFR 1910.1200.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur. If ingestion of a large amount does occur, call a poison control center immediately.

Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed. Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.
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	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	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Avoid contact with eyes, skin, and clothing. Avoid inhalation of vapors or mists. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	The product is immiscible with water and will spread on the water surface. 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. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. 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.

7. Handling and storage

Precautions for safe handling	Avoid contact with eyes, skin, and clothing. Avoid breathing mist or vapor. Avoid prolonged exposure. Observe good industrial hygiene practices. See Section 8 of the SDS for Personal Protective Equipment.
Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Use adequate ventilation to control airborne concentrations below the exposure limits/guidelines. If user operations generate a vapor, dust and/or mist, use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits/guidelines.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Suitable chemical protective gloves should be worn when the potential exists for prolonged or repeated skin exposure. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Nitrile gloves are recommended.
Other	Wear suitable protective clothing. Wear appropriate chemical resistant clothing if applicable.

Respiratory protection	If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, an approved respirator must be worn. Respirator selection, use and maintenance should be in accordance with the requirements of OSHA Respiratory Protection Standard 29 CFR 1910.134 and/or Canadian Standard CSA Z94.4.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	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	Liquid.
Color	Red.
Odor	Hydrocarbon-like.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	>= 314.6 °F (>= 157.0 °C) ASTM D93
Evaporation rate	< 1 (BuAc=1)
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	< 1 mm Hg
Vapor pressure temp.	68 °F (20 °C)
Vapor density	> 1 (AIR=1)
Relative density	0.85 - 0.86
Relative density temperature	60.08 °F (15.6 °C)
Solubility(ies)	
Solubility (water)	NEGLIGIBLE
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Kinematic viscosity	33 cSt
Kinematic viscosity temperature	104 °F (40 °C)

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	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Strong reducing agents.

Hazardous decomposition products	Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. Oxides of phosphorus. Sulfur oxides. Nitrogen oxides (NOx).

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. May cause an allergic skin reaction.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity	Not available.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	May cause an allergic skin reaction.
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. Base oil severely refined: Not carcinogenic in animal studies. Representative material passes IP-346, Modified Ames test, and/or other screening tests.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	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.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	
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	Don't pollute. Conserve resources. Return used oil to collection centers. Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
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 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

<Unspecified>

Not regulated as dangerous goods.

IATA

<Unspecified>

Not regulated as dangerous goods.

IMDG

<Unspecified>

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

US federal regulations This product is not known to be 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)

Not 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 - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

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

Not regulated.

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. Massachusetts RTK - Substance List

Not regulated.

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

Not listed.

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

Not listed.

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

International Inventories

All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

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

Issue date	09-21-2015
Version #	01
HMIS® ratings	Health: 1 Flammability: 1 Physical hazard: 0
NFPA ratings	Health: 0 Flammability: 1 Instability: 0
Preparation Information and Disclaimer	This document was prepared by FCSD-Toxicology, Ford Motor Company, Diagnostic Service Center II, 1800 Fairlane Drive, Allen Park, MI 48101, USA, based in part on information provided by the manufacturer. The information on this data sheet represents our current data and is accurate to the best of our knowledge as to the proper handling of this product under normal conditions and in accordance with the application specified on the packaging and/or technical guidance literature. Any other use of the product which involves using the product in combination with any other product or any other process is the responsibility of the user. To the extent that there are any differences between this product's Safety Data Sheet (SDS) and the consumer packaged product labels, the SDS should be followed.
Part number(s)	XL-14, XT-5-5QM, XT-5-6GM, XT-5-BM, XT-5-DMC, XT-5-DMCR, XT-5-GM, XT-5-QM, XT-5-QM1 XT-5-QMC, XT-5-RM

Valvoline® GM MULTIPURPOSE GREASE
® Registered Trademark, Ashland or its subsidiaries
VV616

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Ashland P.O. Box 2219 Columbus, OH 43216	Regulatory Information Number Telephone Emergency telephone number	1-800-325-3751 614-790-3333 1-800-ASHLAND (1-800-274-5263)

Product name	Valvoline® GM MULTIPURPOSE GREASE ® Registered Trademark, Ashland or its subsidiaries
Product code	VV616
Product Use Description	No data

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: solid, amber

CAUTION! PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION.

Potential Health Effects

Exposure routes
Inhalation, Skin contact, Eye Contact, Ingestion

Eye contact
May cause mild eye irritation. Symptoms include stinging, tearing, and redness.

Skin contact
May cause skin irritation. Symptoms may include redness, burning, and swelling of skin.

Ingestion
Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful.

Inhalation

It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8.).

Aggravated Medical Condition

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material:, Skin, lung (for example, asthma-like conditions)

Symptoms

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:, stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways)

Target Organs

No data

Carcinogenicity

This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA).

Reproductive hazard

There are no data available for assessing risk to the fetus from maternal exposure to this material.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components	CAS-No.	Concentration
HIGHLY REFINED PETROLEUM OILS		>=80-<90%
OCTADECANOIC ACID, 12-HYDROXY-, MONOLITHIUM SALT	7620-77-1	>=10-<15%
LITHIUM CARBOXYLATE		>=1.5-<5%
ZINC COMPOUNDS	68649-42-3	>=1.5-<5%

4. FIRST AID MEASURES

Eyes

If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention.

Skin

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse. Hydrocarbons injected into the skin under pressure can cause severe injury. In the event of a high pressure injection injury, worker should obtain immediate medical assistance.

Ingestion

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

Notes to physician

Hazards: 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.

Treatment: No information available.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Water spray, Foam, Dry chemical, Carbon dioxide (CO2)

Hazardous combustion products

carbon dioxide and carbon monoxide, hydrogen sulfide, zinc oxide, oxides of sulfur, nitrogen and phosphorus, Amines

Precautions for fire-fighting

Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). DO NOT direct a solid stream of water or foam into hot, burning pools of liquid since this may cause frothing and increase fire intensity. Frothing can be violent and possibly endanger any firefighter standing too close to the burning liquid. Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning material with water used for cooling purposes.

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

For personal protection see section 8. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions

Do not flush into surface water or sanitary sewer system.

Methods for cleaning up

Shovel material into containers and apply oil absorbing material to effect complete clean-up.

Other information

Comply with all applicable federal, state, and local regulations.

7. HANDLING AND STORAGE

Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

Storage

Store in a cool, dry, ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

General advice

These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Exposure controls

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.

Eye protection

Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.

Skin and body protection

Wear resistant gloves such as:
Neoprene
Wear normal work clothing including long pants, long-sleeved shirts and foot covering to prevent direct contact of the product with the skin. Launder clothing before reuse. If skin irritation develops, contact your facility health and safety professional or your local safety equipment supplier to determine the proper personal protective equipment for your use.

Respiratory protection

Respiratory protection is not required under normal conditions of use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	solid
Form	gel
Colour	amber
Odour	no data available
Boiling point/boiling range	no data available
Melting point/range	no data available
Sublimation point	no data available
pH	no data available
Flash point	450 °F / 232 °C
Ignition temperature	no data available
Evaporation rate	no data available
Lower explosion limit/Upper explosion limit	no data available
Particle size	no data available
Vapour pressure	2.000 hPa Calculated Vapor Pressure
Relative vapour density	no data available
Density	0.86 g/cm3 @ 60.1 °F / 15.6 °C
Bulk density	No data
Water solubility	negligible
Solubility	no data available
Partition coefficient: n-octanol/water	no data available
log Pow	no data available
Autoignition temperature	no data available
Viscosity, dynamic	no data available
Viscosity, kinematic	no data available
Solids in Solution	no data available
Decomposition temperature	no data available
Burning number	no data available
Dust explosion constant	no data available
Minimum ignition energy	no data available

10. STABILITY AND REACTIVITY

Stability

Stable.

Conditions to avoid
excessive heat

Incompatible products
Strong oxidizing agents

Hazardous decomposition products
carbon dioxide and carbon monoxide

Hazardous reactions
Product will not undergo hazardous polymerization.

Thermal decomposition
No data

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity

HIGHLY REFINED PETROLEUM OILS	:	no data available
OCTADECANOIC ACID, 12-HYDROXY-, MONOLITHIUM SALT	:	no data available
LITHIUM CARBOXYLATE	:	no data available
ZINC COMPOUNDS	:	LD 50 Rat: 2,000 - 5,000 mg/kg

Acute inhalation toxicity

HIGHLY REFINED PETROLEUM OILS	:	no data available
OCTADECANOIC ACID, 12-HYDROXY-, MONOLITHIUM SALT	:	no data available
LITHIUM CARBOXYLATE	:	no data available
ZINC COMPOUNDS	:	no data available

Acute dermal toxicity

HIGHLY REFINED PETROLEUM OILS	:	no data available
OCTADECANOIC ACID, 12-HYDROXY-, MONOLITHIUM SALT	:	no data available
LITHIUM CARBOXYLATE	:	no data available
ZINC COMPOUNDS	:	LD 50 Rabbit: (>) 2,000 mg/kg

12. ECOLOGICAL INFORMATION

Biodegradability

HIGHLY REFINED PETROLEUM OILS	:	no data available
OCTADECANOIC ACID, 12-HYDROXY-, MONOLITHIUM SALT	:	no data available
LITHIUM CARBOXYLATE	:	no data available
ZINC COMPOUNDS	:	no data available

Bioaccumulation

HIGHLY REFINED PETROLEUM OILS	:	no data available
OCTADECANOIC ACID, 12-HYDROXY-, MONOLITHIUM SALT	:	no data available
LITHIUM CARBOXYLATE	:	no data available
ZINC COMPOUNDS	:	no data available

Ecotoxicity effects

Toxicity to fish

HIGHLY REFINED PETROLEUM OILS	:	no data available
OCTADECANOIC ACID, 12-HYDROXY-, MONOLITHIUM SALT	:	no data available
LITHIUM CARBOXYLATE	:	no data available

ZINC COMPOUNDS	:	no data available

Toxicity to daphnia and other aquatic invertebrates.

HIGHLY REFINED PETROLEUM OILS	:	no data available
OCTADECANOIC ACID, 12-HYDROXY-, MONOLITHIUM SALT	:	no data available
LITHIUM CARBOXYLATE	:	no data available
ZINC COMPOUNDS	:	no data available

Toxicity to algae

HIGHLY REFINED PETROLEUM OILS	:	no data available
OCTADECANOIC ACID, 12-HYDROXY-, MONOLITHIUM SALT	:	no data available
LITHIUM CARBOXYLATE	:	no data available
ZINC COMPOUNDS	:	no data available

Toxicity to bacteria

HIGHLY REFINED PETROLEUM OILS	:	no data available
OCTADECANOIC ACID, 12-HYDROXY-, MONOLITHIUM SALT	:	no data available
LITHIUM CARBOXYLATE	:	no data available
ZINC COMPOUNDS	:	no data available

Biochemical Oxygen Demand (BOD)

HIGHLY REFINED PETROLEUM OILS	:	no data available
OCTADECANOIC ACID, 12-HYDROXY-, MONOLITHIUM SALT	:	no data available
LITHIUM CARBOXYLATE	:	no data available
ZINC COMPOUNDS	:	no data available

Chemical Oxygen Demand (COD)

HIGHLY REFINED PETROLEUM OILS	:	no data available

OCTADECANOIC ACID, 12-HYDROXY-, MONOLITHIUM SALT	:	no data available
LITHIUM CARBOXYLATE	:	no data available
ZINC COMPOUNDS	:	no data available

Additional ecological information

HIGHLY REFINED PETROLEUM OILS	:	no data available
OCTADECANOIC ACID, 12-HYDROXY-, MONOLITHIUM SALT	:	no data available
LITHIUM CARBOXYLATE	:	no data available
ZINC COMPOUNDS	:	no data available

13. DISPOSAL CONSIDERATIONS

Waste disposal methods

Dispose of in accordance with all applicable local, state and federal regulations. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Ashland Distribution's Environmental Services Group at 800-637-7922.

14. TRANSPORT INFORMATION

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**

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.

15. REGULATORY INFORMATION

California Prop. 65

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

SARA Hazard Classification

No SARA Hazards

SARA 313 Component(s)

ZINC COMPOUNDS	1.99 %

New Jersey RTK Label Information

HIGHLY REFINED PETROLEUM OILS	
OCTADECANOIC ACID, 12-HYDROXY-, MONOLITHIUM SALT	7620-77-1
LITHIUM CARBOXYLATE	
ZINC COMPOUNDS	68649-42-3
PROPRIETARY LUBRICANT ADDITIVE	

Pennsylvania RTK Label Information

HIGHLY REFINED PETROLEUM OILS	
OCTADECANOIC ACID, 12-HYDROXY-, MONOLITHIUM SALT	7620-77-1
LITHIUM CARBOXYLATE	

Notification status

US. Toxic Substances Control Act	y (positive listing)
Australia. Industrial Chemical (Notification and Assessment) Act	y (positive listing)
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	n (Negative listing)
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133)	y (positive listing)
Japan. Kashin-Hou Law List	y (positive listing)
Korea. Toxic Chemical Control Law (TCCL) List	y (positive listing)
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	y (positive listing)
China. Inventory of Existing Chemical Substances	y (positive listing)

	HMIS	NFPA
Health	1	1
Flammability	1	1
Physical hazards	0	
Instability		0
Specific Hazard	--	--

16. OTHER INFORMATION

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 MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

MATERIAL SAFETY DATA SHEET

Date Prepared: 07/22/03
Date Printed: 10/02/06
MSDS No: 505.0393450-001.001

PL HIGH MILEAGE MOTOR OIL 10W30

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity
Product Name: PL HIGH MILEAGE MOTOR OIL 10W30
SAP Material No: NP75305

General or Generic ID: PRIVATE LABEL HIGH MILEAGE MOTOR OIL 10W30

Company	Telephone Numbers
The Valvoline Company	Emergency: 1-800-274-5263
P.O. Box 14000	
Lexington, KY 40512	Information: 1-859-357-7206

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	% (by weight)
ALIPHATIC PETROLEUM DISTILLATES	64742-65-0	79.0- 89.0
DETERGENT/DISPERSANT ADDITIVE		6.0- 16.0
VISCOSITY INDEX IMPROVER		1.0- 9.0
ZINC COMPOUNDS		1.0- 6.0
ALKYLATED PHENOL	26998-80-1	1.0- 6.0

3. HAZARDS IDENTIFICATION

Potential Health Effects

Eye

Can cause eye irritation.

Skin

Prolonged or repeated contact may dry and crack the skin. Additional symptoms of skin contact may include: acne, Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects during safe handling and use

Swallowing

Swallowing this material is not likely to be harmful.

Inhalation

It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing small amounts of this material during normal handling is not likely to cause harmful effects.

Symptoms of Exposure

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea) irritation (nose, throat, airways).

Target Organ Effects
No data

Developmental Information

There are no data available for assessing risk to the fetus from maternal exposure to this material.

Cancer Information
This material is not listed as a carcinogen by the International Agency for Research on Cancer, the National Toxicology Program, or the Occupational Safety and Health Administration. Used motor oil has been shown to cause skin cancer in laboratory animals continually exposed by repeated applications. Avoid prolonged or repeated skin contact.

Other Health Effects
No data

Primary Route(s) of Entry

Inhalation, Skin contact, Eye contact, Ingestion.

4. FIRST AID MEASURES

Eyes

If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention.

Skin
Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

Swallowing
First aid is not normally required. If symptoms develop, seek medical attention.

Inhalation
If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

Note to Physicians

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. Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin, lung (for example, asthma-like conditions).

5. FIRE FIGHTING MEASURES

Flash Point
228.0 F (108.8 C)
Explosive Limit
No data
Autoignition Temperature
No data
Hazardous Products of Combustion
May form: carbon dioxide and carbon monoxide, nitrogen oxides, sulfur oxides, various hydrocarbons.

Fire and Explosion Hazards
Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

Extinguishing Media
Regular foam, carbon dioxide, dry chemical.

Fire Fighting Instructions
Water or foam may cause frothing which can be violent and possibly endanger the life of the firefighter. Water may be used to keep fire-exposed containers cool until fire is out. Wear a self-contained breathing apparatus with a full face piece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.

NFPA Rating

Health - 2, Flammability - 1, Reactivity - 0

6. ACCIDENTAL RELEASE MEASURES

Small Spill

Absorb liquid on vermiculite, floor absorbent or other absorbent material.

Large Spill

Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred. Notify the proper authorities as required that a spill has occurred. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

7. HANDLING AND STORAGE

Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. All five gallon pails and larger metal containers including tank cars and tank trucks should be grounded and/or bonded when material is transferred. Precautions during use: avoid prolonged or frequently repeated skin contact with this
material. Skin contact can be minimized by wearing impervious protective gloves. As with all products of this nature, good personal hygiene is essential. Hands and other exposed areas should be washed thoroughly with soap and water after contact, especially before eating and/or smoking. Regular laundering of contaminated clothing is essential to reduce indirect skin contact with this material.

Storage

Do not store near extreme heat, open flame, or sources of ignition.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection

Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

Skin Protection

Wear impervious gloves (consult your safety equipment supplier). To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

Respiratory Protections

If workplace exposure limit(s) of product or any component is exceeded (See Exposure Guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (consult your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

Engineering Controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

Exposure Guidelines

Component

ALIPHATIC PETROLEUM DISTILLATES (64742-65-0)

OSHA VPEL 5.000 mg/m3 - TWA

ACGIH TLV 5.000 mg/m3 - TWA

DETERGENT/DISPERSANT ADDITIVE
No exposure limits established

VISCOSITY INDEX IMPROVER
No exposure limits established

ZINC COMPOUNDS
No exposure limits established

ALKYLATED PHENOL (26998-80-1)
No exposure limits established

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point
(for component) > 425.0 F (218.3 C)

Vapor Pressure
(for product) .000

Specific Vapor Density
No data

Specific Gravity
.872 @ 60.00 F

Liquid Density
7.260 lbs/gal @ 60.00 F

7.260 lbs/gal @ 60.00 F

Percent Volatiles (Including Water)
No data

Evaporation Rate
No data

Appearance
CLEAR, DRY, & BRIGHT

State
LIQUID

Physical Form
No data

Color
AMBER
Odor
No data

pH
No data

Viscosity
10.8 cst @ 100 C

10. STABILITY AND REACTIVITY

Hazardous Polymerization
Product will not undergo hazardous polymerization.

Hazardous Decomposition
May form: alcohols, aldehydes, carbon dioxide and carbon monoxide hydrogen sulfide, various hydrocarbons.

Chemical Stability
Stable.

Incompatibility
Avoid contact with: acids, alkalies, chlorine, halogens, strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION

No data

12. ECOLOGICAL INFORMATION

No data

13. DISPOSAL CONSIDERATION

Waste Management Information
Dispose of in accordance with all applicable local, state and federal regulations.

14. TRANSPORT INFORMATION

DOT Information - 49 CFR 172.101

DOT Description:
Not Regulated

Container/Mode:
CASES/SURFACE - NO EXCEPTIONS

NOS Component:
None

RQ (Reportable Quantity) - 49 CFR 172.101
Not applicable

15. REGULATORY INFORMATION

US Federal Regulations

TSCA (Toxic Substances Control Act) Status

TSCA (UNITED STATES) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4
None

SARA 302 Components - 40 CFR 355 Appendix A
None

Section 311/312 Hazard Class - 40 CFR 370.2
Immediate(X) Delayed( ) Fire( ) Reactive( ) Sudden Release of Pressure( )

SARA 313 Components - 40 CFR 372.65
Section 313 Component(s) CAS Number

ZINC COMPOUNDS

International Regulations
Inventory Status
AICS (AUSTRALIA) The intentional ingredients of this product are listed.
DSL (CANADA) The intentional ingredients of this product are listed.
ECL (SOUTH KOREA) The intentional ingredients of this product are listed.
EINECS (EUROPE) This material or a component requires notification before sale or importation.
ENCS (JAPAN) the intentional ingredients of this product are listed.
PICCS (PHILIPPINES) The intentional ingredients of this product are listed.

State and Local Regulations
California Proposition 65
None

16. OTHER INFORMATION

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.

11/16/05

AMERADA HESS CORPORATION

NFPA 704 (Section 16)

MATERIAL SAFETY DATA SHEET

HESS 10W30 Motor Oil — **MSDS No. 8957**

1. CHEMICAL PRODUCT and COMPANY INFORMATION

Amerada Hess Corporation
1 Hess Plaza
Woodbridge, NJ 07095-0961

Manufactured by: **The Valvoline Company**
P.O. Box 14000
Lexington, KY 40512

EMERGENCY TELEPHONE NUMBER: **VALVOLINE: 800-247-5263**
COMPANY CONTACT (business hours): Valvoline Info: 606-357-7847
AHC Corporate Safety 732-750-6000

SYNONYMS: Valvoline Product Code 52670413

This product is manufactured by The Valvoline Company and packaged under the Amerada Hess ("Hess") label. The information in this MSDS has been developed by The Valvoline Company, MSDS No. 505.0170829-014.002I, date 5/11/99.

See Section 16 for abbreviations and acronyms.

2. COMPOSITION and INFORMATION ON INGREDIENTS

INGREDIENT NAME	EXPOSURE LIMITS	CONCENTRATION PERCENT BY WEIGHT
Aliphatic Petroleum Distillates CAS NUMBER: 64742-65-0	OSHA PEL-TWA: 5 mg/m^3 as mineral oil mist ACGIH TLV-TWA: 5 mg/m^3 as mineral oil mist	83.0 – 93.0
Detergent/ Dispersant Engine Oil Package	No exposure limits established	N/A
Zinc Compounds	No exposure limits established	N/A

Petroleum-based lubricating oil with detergent/dispersant engine oil package with zinc compounds.

3. HAZARDS IDENTIFICATION

EYES
May cause mild eye irritation. Symptoms include stinging, tearing, and redness.

SKIN
May cause mild skin irritation. Prolonged or repeated contact may dry the skin. Symptoms include redness, burning, drying and cracking of the skin, and skin burns. Additional symptoms of skin contact include: acne. Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects during safe handling and use.

INGESTION
Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful.

INHALATION
It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms usually occur at air concentrations higher than the recommended exposure limits.

SYMPTOMS OF EXPOSURE
Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset, (nausea, vomiting, diarrhea), irritation (nose, throat, airways), blood abnormalities (breakage of blood cells), liver damage.

TARGET ORGAN EFFECTS
No data

DEVELOPMENTAL INFORMATION
There are no data available for assessing risk to the fetus from maternal exposure to this material.

CANCER INFORMATION
This material is not listed as a carcinogen by IARC, NTP, or OSHA. Used motor oil has been shown to cause skin cancer in laboratory animal continually exposed by repeated applications. Avoid prolonged or repeated skin contact.

OTHER HEALTH EFFECTS
No data

4. FIRST AID MEASURES

EYES
If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is visual difficulty, seek medical attention.

SKIN
Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

INGESTION
Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

INHALATION
If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

Note to Physicians
Acute aspiration of large amounts of oil-laden material may produce a serious aspiration hazard. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration 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. Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

FLASH POINT:	430.0 °F (221.1 °C) COC
AUTOIGNITION POINT:	No data
EXPLOSIVE LIMITS (%):	No data

HAZARDOUS PRODUCTS OF COMBUSTION
May form: carbon dioxide and carbon monoxide, oxides of sulfur, nitrogen and phosphorous, various hydrocarbons.

FIRE AND EXPLOSION HAZARDS
Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. No special fire hazards are known to be associated with this product. Dense smoke may be generated while burning.

EXTINGUISHING MEDIA
Regular fire fighting foam, carbon dioxide, dry chemical.

FIRE FIGHTING INSTRUCTIONS
Water or foam may cause frothing which can be violent and possibly endanger the life of the firefighter. Water may be used to keep fire-exposed containers cool until fire is out. Wear a self-contained breathing apparatus with full facepiece operated in the pressure-demand mode with appropriate turnout gear and chemical resistant personal protective equipment. Refer to Section 8.

See Section 16 for the NFPA 704 Hazard Rating.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Absorb liquid on vermiculite, floor absorbent or other absorbent material. Persons not wearing proper personal protective equipment should be excluded from area of spill.

LARGE SPILL: Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify authorities as required, that a spill has occurred. Persons not wearing proper personal protective equipment should be excluded from area of spill until clean-up has been completed.

7. HANDLING and STORAGE

HANDLING PRECAUTIONS
Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. All five gallon pails and larger metal containers including tank cars and tank trucks should be grounded and/or bonded when material is transferred. Precautions during use: avoid prolonged or frequently repeated skin contact with this material. Skin contact can be minimized by wearing impervious protective gloves. As with all products of this nature, good personal hygiene is essential. Hands and other exposed areas should be washed thoroughly with soap and water after contact, especially before eating and/or smoking. Regular laundering of contaminated clothing is essential to reduce indirect skin contact with this material. Warning. Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.

STORAGE PRECAUTIONS
Do not store near extreme heat, open flame, or sources of ignition.

8. EXPOSURE CONTROLS and PERSONAL PROTECTION

ENGINEERING CONTROLS
Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

EYE PROTECTION
Not required under normal conditions of use. However, if misting or splashing conditions exist, then safety glasses or chemical splash goggles are advised.

SKIN PROTECTION
Not normally required. However, wear resistant gloves such as nitrile rubber to prevent irritation which may result from prolonged or repeated skin contact with product., To prevent repeated or prolonged skin contact, wear impervious clothing and boots. Wear normal work clothing covering arms and legs.

RESPIRATORY PROTECTION
If workplace exposure limit(s) of product or any component is exceeded (See Exposure Guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (consult your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure. Not required under normal conditions of use. However, if oil mists are

generated above recommended PEL/TLV of 5 mg/m3, then a NIOSH/MSHA approved respirator is advised in absence of proper environmental control. (See your industrial hygienist.)

9. PHYSICAL and CHEMICAL PROPERTIES

APPEARANCE
Dry, clear, and bright liquid

ODOR
No data

BASIC PHYSICAL PROPERTIES

BOILING RANGE:	(for component) > 425.0 F (218.3 C) @ 760.00 mmHg
VAPOR PRESSURE:	Not applicable
VAPOR DENSITY (air = 1):	No data
LIQUID DENSITY:	7.340 lbs/gal @ 60.00 F (.881 kg/l @ 15.60 C)
SPECIFIC GRAVITY (H_2O = 1):	0.881 @ 60F
PERCENT VOLATILES:	No data
EVAPORATION RATE:	Slower than ethyl ether
pH:	Not applicable
VISCOSITY:	<= 3300.0 cps @ -20 C; 10.0 - 11.0 cst @ 100 C

10. STABILITY and REACTIVITY

STABILITY: Stable. Product will not undergo hazardous polymerization.

INCOMPATIBLE MATERIALS
Avoid contact with: acids, halogens, strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS
May form: aldehydes, carbon dioxide and carbon monoxide, hydrogen sulfide, oxides of sulfur, nitrogen and phosphorus, toxic fumes, various hydrocarbons.

11. TOXICOLOGICAL PROPERTIES

No data

12. ECOLOGICAL INFORMATION

No data

13. DISPOSAL CONSIDERATIONS

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

14. TRANSPORTATION INFORMATION

DOT Information - 49 CFR 172.101
DOT Description: Not Regulated
Container/Mode: CASES/SURFACE - NO EXCEPTIONS
NOS Component: None
RQ (Reportable Quantity) - 49 CFR 172.101: Not applicable

15. REGULATORY INFORMATION

TSCA (Toxic Substances Control Act) Status (UNITED STATES)
The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4: None

SARA 302 Components - 40 CFR 355 Appendix A: None

SARA Section 311/312 Hazard Class - 40 CFR 370.2
Immediate (X) Delayed (X) Fire(--) Reactive (--) Sudden Release of Pressure (--)

SARA 313 Components - 40 CFR 372.65 Section 313 Component(s) and CAS Number:
ZINC C1-C14 ALKYLDITHIOPHOSPHATE (CAS No. 68649-42-3)

International Regulations Inventory Status: Not determined

State and Local Regulations: California Proposition 65 None

16. OTHER INFORMATION

NFPA® HAZARD RATING	HEALTH:	1	Slight
	FIRE:	1	Slight
	REACTIVITY:	0	Negligible
HMIS® HAZARD RATING	HEALTH:	1*	Slight
	FIRE:	1	Slight
	REACTIVITY:	0	Negligible
			* Chronic

OTHER: The information presented in this MSDS was taken directly from the MSDS for this product prepared by The Valvoline Company, the manufacturer of the product -- see Section 2.

ABBREVIATIONS:

AP = Approximately	< = Less than	> = Greater than
N/A = Not Applicable	N/D = Not Determined	ppm = parts per million

ACRONYMS:

ACGIH	American Conference of Governmental Industrial Hygienists
AIHA	American Industrial Hygiene Association
ANSI	American National Standards Institute (212) 642-4900
API	American Petroleum Institute (202) 682-8000
CERCLA	Comprehensive Emergency Response, Compensation, and Liability Act
DOT	U.S. Department of Transportation [General info: (800) 467-4922]
EPA	U.S. Environmental Protection Agency
HMIS	Hazardous Materials Information System
IARC	International Agency For Research On Cancer
MSHA	Mine Safety and Health Administration
NFPA	National Fire Protection Association (617) 770-3000
NIOSH	National Institute of Occupational Safety and Health
NOIC	Notice of Intended Change (proposed change to ACGIH TLV)
NTP	National Toxicology Program
OPA	Oil Pollution Act of 1990
OSHA	U.S. Occupational Safety & Health Administration
PEL	Permissible Exposure Limit (OSHA)
RCRA	Resource Conservation and Recovery Act
REL	Recommended Exposure Limit (NIOSH)
SARA	Superfund Amendments and Reauthorization Act of 1986 Title III
SCBA	Self-Contained Breathing Apparatus
SPCC	Spill Prevention, Control, and Countermeasures
STEL	Short-Term Exposure Limit (generally 15 minutes)
TLV	Threshold Limit Value (ACGIH)
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average (8 hr.)
WEEL	Workplace Environmental Exposure Level (AIHA)
WHMIS	Canadian Workplace Hazardous Materials Information System

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ PREMIUM CONVENTIONAL SAE 30 MOTOR OIL

Recommended use of the chemical and restrictions on use

Details of the supplier of the safety data sheet	**Emergency telephone number**
Ashland P.O. Box 2219 Columbus, OH 43216 United States of America EHS Customer Requests@ashland.com	1-800-ASHLAND (1-800-274-5263) **Regulatory Information Number** 1-800-325-3751 **Product Information** 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 (%)
Benzenesulfonic acid, C10-60-alkyl derivs., sodium salts	90194-32-4	Eye Irrit. 2A; H319	6.24

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	:	No symptoms known or expected.
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. Water spray Foam Carbon dioxide (CO2) 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 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). 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. 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
Odour	:	No data available
Odour Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Boiling point/boiling range	:	No data available
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) Calculated Explosive Limit
Lower explosion limit	:	1 %(V) Calculated Explosive Limit
Vapour pressure	:	0.0133333 hPa (21.11 °C) Calculated Vapor Pressure
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	0.8785 g/cm3 (15.6 °C)
Solubility(ies)		
Water solubility	:	insoluble
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	:	80 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		No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

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

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

Components:
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:
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

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
No data available
Persistence and degradability
No data available

Bioaccumulative potential
No data available

Mobility in soil

No data available

Other adverse effects

No data available

Product:

Additional ecological information : No data available

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 : 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.

Component(s)SARA 313

Pennsylvania Right To Know

HEAVY PARAFFINIC DISTILLATE	64742-54-7	90.00 - 100.00 %
Benzenesulfonic acid, C10-60-alkyl derivs., sodium salts	90194-32-4	5.00 - 10.00 %

New Jersey Right To Know

HEAVY PARAFFINIC DISTILLATE	64742-54-7	90.00 - 100.00 %
Benzenesulfonic acid, C10-60-alkyl derivs., sodium salts	90194-32-4	5.00 - 10.00 %
POLYOLEFIN AMIDE ALKENEAMINE	Not Assigned	1.00 - 5.00 %

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:

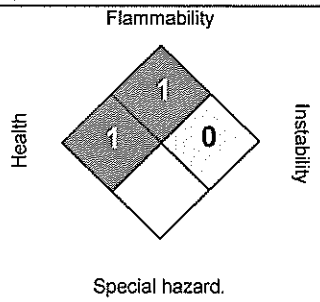
TSCA	:	On TSCA Inventory
DSL	:	All components of this product are on the Canadian DSL.
AUSTR	:	On the inventory, or in compliance with the inventory
NZIOC	:	Not in compliance with the inventory
KECL	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	Low volume exemption

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: 05/22/2015

NFPA:



HMIS III:

HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARD	0

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.

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

State Regulations

Component Analysis - State

None of this product's components are listed on the state lists from CA, MA, MN, NJ, PA, or RI.

Component Analysis - WHMIS IDL

No components are listed in the WHMIS IDL.

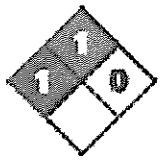
Additional Regulatory Information

Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Petroleum distillates, solvent dewaxed heavy paraffinic	64742-65-0	Yes	DSL	EINECS

* * * Section 16 - Other Information * * *

NFPA® Hazard Rating	Health	1	
	Fire	1	
	Reactivity	0	



HMIS® Hazard Rating	Health	1*	Slight
	Fire	1	Slight
	Physical	0	Minimal
			*Chronic

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.

Literature References

None

Other Information

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

End of Sheet

Aspiration Respiratory Organs Hazard

Acute aspiration of large amounts of oil-laden material may produce a serious aspiration hazard.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

A: General Product Information

Keep out of sewers, drainage areas and waterways. Report spills and releases, as applicable, under Federal and State regulations.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Petroleum distillates, solvent dewaxed heavy paraffinic (64742-65-0)

Test & Species	Conditions
96 Hr LC50 Oncorhynchus mykiss	>5000 mg/L
48 Hr EC50 Daphnia magna	>1000 mg/L

Persistence/Degradability

No information available.

Bioaccumulation

No information available.

Mobility in Soil

No information available.

* * * Section 13 - Disposal Considerations * * *

Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 14 - Transportation Information * * *

DOT Information

Shipping Name: Not Regulated

* * * Section 15 - Regulatory Information * * *

Regulatory Information

Component Analysis

None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

SARA Section 311/312 – Hazard Classes

Acute Health	Chronic Health	Fire	Sudden Release of Pressure	Reactive
X	X	--	--	--

SARA SECTION 313 - SUPPLIER NOTIFICATION

ZINC C1-C14 ALKYLDITHIOPHOSPHATE (CAS No. 68649-42-3)

* * * Section 11 - Toxicological Information * * *

Acute Toxicity

A: General Product Information

Harmful if large amounts are swallowed.

B: Component Analysis - LD50/LC50

Petroleum distillates, solvent dewaxed heavy paraffinic (64742-65-0)

Inhalation LC50 Rat >4.7 mg/L 4 h; Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >5000 mg/kg

Potential Health Effects: Skin Corrosion Property/Stimulativeness

May cause mild skin irritation. Prolonged or repeated contact may dry the skin. Symptoms include redness, burning, drying and cracking of the skin, and skin burns. Additional symptoms of skin contact include: acne. Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects during safe handling and use.

Potential Health Effects: Eye Critical Damage/ Stimulativeness

May cause mild eye irritation. Symptoms include stinging, tearing, and redness.

Potential Health Effects: Ingestion

Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful.

Potential Health Effects: Inhalation

It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms usually occur at air concentrations higher than the recommended exposure limits.

Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any skin sensitization effects.

Generative Cell Mutagenicity

This product is not reported to have any mutagenic effects.

Carcinogenicity

A: General Product Information

May cause cancer.

Used motor oil has been shown to cause skin cancer in laboratory animal continually exposed by repeated applications.

B: Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

Reproductive Toxicity

This product is not reported to have any reproductive toxicity effects.

Specified Target Organ General Toxicity: Single Exposure

This product is not reported to have any specific target organ general toxicity single exposure effects.

Specified Target Organ General Toxicity: Repeated Exposure

This product is not reported to have any specific target organ general toxicity repeat exposure effects.

Personal Protective Equipment: Hands

Not normally required. However, wear resistant gloves such as nitrile rubber to prevent irritation which may result from prolonged or repeated skin contact with product.

Personal Protective Equipment: Eyes

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

Personal Protective Equipment: Skin and Body

To prevent repeated or prolonged skin contact, wear impervious clothing and boots. Wear normal work clothing covering arms and legs.

Hygiene Measures

Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance:	Dry, clear and bright	**Odor:**	None
Physical State:	Liquid	**pH:**	ND
Vapor Pressure:	ND	**Vapor Density:**	ND
Boiling Point:	>425 °F (218.3°C) @ 760.00 mmHg	**Melting Point:**	ND
Solubility (H2O):	Negligible	**Specific Gravity:**	0.876 @ 60°F (16°C)
Evaporation Rate:	Slower than ethyl ether	**VOC:**	ND
Viscosity:	<= 3300.0 cps @ -25°C; 10.5 - 11.2 cst @ 100°C	**Octanol/H2O Coeff.:**	ND
Flash Point:	410 °F (210.0 °C)	**Flash Point Method:**	COC
Upper Flammability Limit (UFL):	ND	**Lower Flammability Limit (LFL):**	ND
Burning Rate:	ND	**Auto Ignition:**	ND

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Chemical Stability

This is a stable material.

Hazardous Reaction Potential

Will not occur.

Conditions to Avoid

None

Incompatible Products

Avoid contact with: acids, halogens, strong oxidizing agents.

Hazardous Decomposition Products

May form: aldehydes, carbon dioxide and carbon monoxide, hydrogen sulfide, oxides of sulfur, nitrogen and phosphorus, toxic fumes, various hydrocarbons.

Environmental Precautions

Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Prevention of Secondary Hazards

None

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Handle as a combustible liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil) is loaded into tanks previously containing low flash point products (such as this product) - see API Publication 2003, "Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents.

Storage Procedures

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks."

Incompatibilities

Avoid contact with: acids, halogens, strong oxidizing agents.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Component Exposure Limits

ACGIH, OSHA, and NIOSH have not developed exposure limits for any of this product's components.

Engineering Measures

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

Personal Protective Equipment: Respiratory

A NIOSH/MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

Hazardous Combustion Products

May form: carbon dioxide and carbon monoxide, oxides of sulfur, nitrogen and phosphorous, various hydrocarbons.

Extinguishing Media

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray, fire fighting foam, or gaseous extinguishing agent.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

Unsuitable Extinguishing Media

None

Fire Fighting Equipment/Instructions

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment. Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing. Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

* * * Section 6 - Accidental Release Measures * * *

Recovery and Neutralization

Carefully contain and stop the source of the spill, if safe to do so.

Materials and Methods for Clean-Up

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal. Caution, flammable vapors may accumulate in closed containers.

SMALL SPILL: Absorb liquid on vermiculite, floor absorbent or other absorbent material. Persons not wearing proper personal protective equipment should be excluded from area of spill.

LARGE SPILL: Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify authorities as required, that a spill has occurred. Persons not wearing proper personal protective equipment should be excluded from area of spill until clean-up has been completed.

Emergency Measures

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Personal Precautions and Protective Equipment

Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

Storage
Store locked up.
Store in a well-ventilated place.
Keep container tightly closed.

Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS #	Component	Percent
64742-65-0	Petroleum distillates, solvent dewaxed heavy paraffinic	83-93

Petroleum-based lubricating oil with detergent/dispersant engine oil package with zinc compounds.

* * * Section 4 - First Aid Measures * * *

First Aid: Eyes
If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is visual difficulty, seek medical attention.

First Aid: Skin
Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

First Aid: Ingestion
Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

First Aid: Inhalation
Remove person to fresh air. If person is not breathing provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

First Aid: Notes to Physician
Acute aspiration of large amounts of oil-laden material may produce a serious aspiration hazard. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration 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. Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin.

* * * Section 5 - Fire Fighting Measures * * *

General Fire Hazards
See Section 9 for Flammability Properties.
Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. No special fire hazards are known to be associated with this product. Dense smoke may be generated while burning.

Safety Data Sheet

Material Name: Hess 5W30 Motor Oil

SDS No. 9683
US GHS

Synonyms: Valvoline Product Code 52670453

* * * Section 1 - Product and Company Identification * * *

Manufacturer Information

Hess Corporation
1 Hess Plaza
Woodbridge, NJ 07095-0961

Phone: 732-750-6000 Corporate EHS
Emergency # 800-424-9300 CHEMTREC
www.hess.com (Environment, Health, Safety Internet Website)

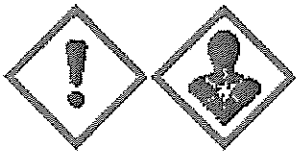
* * * Section 2 - Hazards Identification * * *

GHS Classification:

Skin Corrosion/Irritation – Category 2
Specific Target Organ Toxicity – Category 3 (narcosis)
Carcinogenicity - Category 1B

GHS LABEL ELEMENTS

Symbol(s)



Signal Word

WARNING

Hazard Statements

Causes skin irritation.
May cause cancer.
May cause drowsiness or dizziness.

Precautionary Statements

Prevention

Wash hands and forearms thoroughly after handling.
Wear protective gloves/protective clothing/eye protection.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing fume/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.

Response

If on skin: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.
If exposed or concerned: Get medical advice/attention.
If inhaled: Remove person to fresh air and keep in a position comfortable for breathing. Call poison center or doctor if you feel unwell.

Product Information

A PRODUCT OF VALVOLINE, A DIVISION OF ASHLAND INC.

VALVOLINE VR-1 RACING MOTOR OIL

Valvoline VR-1 Racing Motor Oil is a family of race-proven lubricants formulated to provide high load carrying characteristics, minimum foaming and maximum resistance to thermal degradation. Exclusive chemistry reduces internal friction and enhances power output under extreme service conditions. **Valvoline VR-1 Racing Motor Oil** is recommended for engines burning gasoline and full or partial alcohol fuels in track and street service. **Valvoline VR-1 Racing Motor Oil** is for use in any car, light truck, van, or SUV where API "SN" is recommended (see proper viscosity grade below). **Valvoline VR-1 Racing Motor Oil** is not recommended for use in wet clutches (use Valvoline 4-Stroke Motorcycle Oil).

The Valvoline VR-1 Racing Motor Oil Advantages

- The #1 selling Racing Oil of all time and race track proven.
- Protects against high-temperature deposits for a cleaner engine.
- ZDDP additive provides tough anti-wear protection.
- Enhanced with fricition modifier to improve horsepower.
- Formulated with enhanced anti-foam system.

Approvals/Performance Levels	Viscosity Grade/Other			
API SN	SAE 30	SAE 40	SAE 50	
API SM/SL	SAE 30	SAE 40	SAE 50	
API SH/CD/CF*	SAE 30	SAE 40	SAE 50	
Test	**SAE 30**	**SAE 40**	**SAE 50**	**SAE 60**
Vis @ 100°C (cSt)	11.5	14.5	20.0	24.0
Vis @ 40°C (cSt)	94.87	136.8	219.3	293.4
Viscosity Index	113	105	105	104
Spec Gravity @ 60°F	0.8816	0.8851	0.8901	0.8931
Density (lbs/gal)	7.35	7.38	7.42	7.45
Total Base No.	8.5	8.5	8.5	8.5
Flash COC (°C)	212	248	254	254
Pour Point (°C)	-30	-27	-18	-18
NOACK % off @ 250°C	<15	<15	<15	<15
Sulfated Ash	1	1	1	1
Zinc/Phosphorus	0.14/0.13	0.14/0.13	0.14/0.13	0.14/0.13
Calcium	0.210	0.210	0.210	0.210
Sodium	0.049	0.049	0.049	0.049

* Obsolete Category

This information only applies to products manufactured in the following location(s): USA, Canada

Effective Date:	Replaces:	Author's Initials:	Rev. Code
02-09-2015	12-31-2015	EMF	006

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- Protects against high-temperature deposits for a cleaner engine.
- ZDDP additive provides tough anti-wear protection.
- Enhanced with fricition modifier to improve horsepower.
- Formulated with enhanced anti-foam system.

Approvals/Performance Levels	Viscosity Grade/Other	
API SN/SM/SL	---	20W-50
API SH*	---	20W-50
API SG*	10W-30	20W-50
API CD/CF*	10W-30	20W-50
Test	**10W-30**	**20W-50**
Vis @ 100°C (cSt)	11.50	20.5
Vis @ 40°C (cSt)	77.0	181.8
Viscosity Index	143	132
Spec Gravity @ 60°F	0.8722	0.888
Density (lbs/gal)	7.27	7.39
Total Base No.	8.5	8.5
Flash COC (°C)	212	248
Pour Point (°C)	-33	-24
CCS cP (°C)	6200 (-25°C)	8000 (-15°C)
MRV TP-1 cP (°C)	20,000 (-30°C)	27,000 (-20°C)
NOACK % off @ 250°C	<15	<15
Sulfated Ash	1	1
Zinc/Phosphorus	0.14/0.13	0. 14/0.13
Calcium	0.210	0.210
Sodium	0.049	0.049

* Obsolete Category

This information only applies to products manufactured in the following location(s): USA, Canada

Effective Date:	Replaces:	Author's Initials:	Rev. Code
02-09-2015	12-31-2015	EMF	006

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity
Product Name: HIGH PERFORMANCE GEAR OIL SAE 80W90
SAP Material No: NP75213
General or Generic ID: PETROLEUM BASED-LUBRICATING OIL

Company	Telephone Numbers
The Valvoline Company	Emergency: 1-800-274-5263
P.O. Box 14000	
Lexington, KY 40512	Information: 1-859-357-7206

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	% (by weight)
ALIPHATIC PETROLEUM DISTILLATE		87.0- 97.0
GEAR OIL ADDITIVE		3.6- 14.0

3. HAZARDS IDENTIFICATION

Potential Health Effects
Eye
Unlikely to cause eye irritation or injury.
Skin
Prolonged or repeated contact may dry and crack the skin.
Swallowing
Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful.

Inhalation
Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful.
Symptoms of Exposure
Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea)
Target Organ Effects

No data
Developmental Information
No data
Cancer Information
This material is not listed as a carcinogen by the International Agency for Research on Cancer, the National Toxicology Program, or the Occupational Safety and Health Administration.
Other Health Effects
No data
Primary Route(s) of Entry
Skin contact.

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4. FIRST AID MEASURES
Eyes
If eye contact with liquid occurs, hold eyelids apart and flush eyes gently with lukewarm water. Seek immediate medical attention.

Skin
Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.
Swallowing
Do not induce vomiting. Give one glass of milk or water, and get medical attention immediately. If possible, do not leave victim unattended.
Inhalation
First aid is not normally required. If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention.
Note to Physicians
Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin.

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5. FIRE FIGHTING MEASURES
Flash Point
300.0 F (148.8 C) COC
Explosive Limit
Not applicable
Autoignition Temperature
No data
Hazardous Products of Combustion
May form: carbon dioxide and carbon monoxide, various hydrocarbons.

Fire and Explosion Hazards
Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Dense smoke may be generated while burning.
Extinguishing Media
regular foam, water fog, carbon dioxide, dry chemical.
Fire Fighting Instructions
Water or foam may cause frothing which can be violent and possibly endanger the life of the firefighter.
NFPA Rating
Health - 1, Flammability - 1, Reactivity - 0

6. ACCIDENTAL RELEASE MEASURES

Small Spill
Absorb liquid on vermiculite, floor absorbent or other absorbent material.
Large Spill
Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occured. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source, dike area of spill to prevent spreading, pump liquid to salvage tank. Remaining liquid may be taken up on sand, clay, earth, floor absorbent, or other absorbent material and shoveled into containers.

7. HANDLING AND STORAGE

Handling
Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. Avoid prolonged or repeated contact.

Storage
Keep containers closed when not in use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection
Not required under normal conditions of use. However, if misting or splashing conditions exist, then safety glasses or chemical splash goggles are advised.
Skin Protection
Not normally required. However, wear resistant gloves such as nitrile rubber to prevent irritation which may result from prolonged or repeated skin contact with product.
Respiratory Protections
Not required under normal conditions of use. However, if oil mists are generated above recommended PEL/TLV of 5 mg/m3, then a NIOSH/MSHA approved respirator is advised in absence of proper environmental control. (See your industrial hygienist.)
Engineering Controls
Not required under normal conditions of use. However, if unusual operating conditions exist, then provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below PEL/TLV (s).
Exposure Guidelines
Component

ALIPHATIC PETROLEUM DISTILLATE
No exposure limits established
GEAR OIL ADDITIVE
No exposure limits established

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9. PHYSICAL AND CHEMICAL PROPERTIES
Boiling Point
(for component) > 425.0 F (218.3 C)
Vapor Pressure
Not applicable
Specific Vapor Density
No data
Specific Gravity
.890 @ 60.00 F
Liquid Density
7.480 lbs/gal @ 60.00 F
.890 kg/l @ 15.60 C
Percent Volatiles (Including Water)
No data
Evaporation Rate
Appearance
State
LIQUID
Physical Form
No data
Color
AMBER

Odor
PETROLEUM

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pH
Not applicable
Viscosity
14.0 - 15.0 cst @ 100 C

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10. STABILITY AND REACTIVITY
Hazardous Polymerization
Product will not undergo hazardous polymerization.
Hazardous Decomposition
May form: carbon dioxide and carbon monoxide, various hydrocarbons.
Chemical Stability
Stable. Avoid heat, open flame, and prolonged storage at elevated temperatures.
Incompatibility
Avoid contact with: strong oxidizing agents.

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11. TOXICOLOGICAL INFORMATION
No data

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12. ECOLOGICAL INFORMATION
No data

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13. DISPOSAL CONSIDERATION
Waste Management Information
Dispose of in accordance with all applicable local, state and federal regulations.

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14. TRANSPORT INFORMATION
DOT Information - 49 CFR 172.101
DOT Description:
Not Regulated

Container/Mode:
CASES/SURFACE - NO EXCEPTIONS
NOS Component:
None
RQ (Reportable Quantity) - 49 CFR 172.101
Not applicable

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15. REGULATORY INFORMATION
US Federal Regulations
TSCA (Toxic Substances Control Act) Status
TSCA (UNITED STATES) The intentional ingredients of this product are listed.
CERCLA RQ - 40 CFR 302.4
None
SARA 302 Components - 40 CFR 355 Appendix A
None

Section 311/312 Hazard Class - 40 CFR 370.2
Immediate(X) Delayed( ) Fire( ) Reactive( ) Sudden Release of Pressure( )
SARA 313 Components - 40 CFR 372.65
None
International Regulations
Inventory Status
AICS (AUSTRALIA) The intentional ingredients of this product are listed.
DSL (CANADA) The intentional ingredients of this product are listed.
ECL (SOUTH KOREA) The intentional ingredients of this product are listed.
ENCS (JAPAN) The intentional ingredients of this product are listed.
PICCS (PHILIPPINES) The intentional ingredients of this product are listed.
State and Local Regulations
California Proposition 65
None

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16. OTHER INFORMATION
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.

are listed.
EINECS (EUROPE) The intentional ingredients of this product are listed.
ENCS (JAPAN) The intentional ingredients of this product are listed.

PICCS (PHILIPPINES) The intentional ingredients of this product are listed.
State and Local Regulations
California Proposition 65
None

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16. OTHER INFORMATION
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.

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ HD SAE 75W-90 SYNTHETIC GEAR OIL

Recommended use of the chemical and restrictions on use

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

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin sensitization : Category 1

GHS Label element

Hazard pictograms :

Signal Word : Warning

Hazard Statements : May cause an allergic skin reaction.

Precautionary Statements : If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Prevention:
Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves.
Response:
IF ON SKIN: Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/ attention.
Wash contaminated clothing before reuse.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical Name	CAS-No.	Classification	Concentration (%)
OLEFINSULFIDE	68937-96-2	Skin Sens. 1B; H317 Aquatic Chronic 3; H412	5.00
N-PHENYL-1-NAPHTHYLAMINE	90-30-2	Acute Tox. 4; H302 Skin Sens. 1; H317 STOT RE 2; H373	0.99

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

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 : Remove contaminated clothing. If irritation develops, get medical attention.
If on skin, rinse well with water.
First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing

with soap and water.
Wash contaminated clothing before re-use.

In case of eye contact	:	Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. If eye irritation persists, consult a specialist.
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	:	May cause an allergic skin reaction. No symptoms known or expected.
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. Water spray Foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	:	High volume water jet
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 oxides of sulfur, nitrogen and phosphorus Sulphur oxides
Specific extinguishing methods	:	Product is compatible with standard fire-fighting agents.
Further information	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
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	:	Use personal protective equipment. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). 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	:	Do not breathe vapours/dust. Do not smoke. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. Container hazardous when empty. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. Smoking, eating and drinking should be prohibited in the application area. For personal protection see section 8. Dispose of rinse water in accordance with local and national regulations.
Conditions for safe storage	:	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Engineering measures	:	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

Hand protection

Remarks	:	The suitability for a specific workplace should be discussed with the producers of the protective gloves.
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: impervious clothing Safety shoes Choose body protection according to the amount and concentration of the dangerous substance at the work place. Discard gloves that show tears, pinholes, or signs of wear. Wear resistant gloves (consult your safety equipment supplier).
Hygiene measures	:	Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	:	liquid
Colour	:	amber
Odour	:	pungent
Odour Threshold	:	No data available
pH	:	No data available
	:	
		No data available
	:	No data available
Flash point	:	419 °F / 215 °C Method: Closed Cup
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapour pressure	:	No data available

Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	0.879 g/cm3 (15.56 °C)
Solubility(ies)		
Water solubility	:	insoluble
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	:	122 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.
Conditions to avoid	:	excessive heat
Incompatible materials	:	Strong oxidizing agents
Hazardous decomposition products		carbon dioxide and carbon monoxide oxides of sulfur, nitrogen and phosphorus Sodium oxides

SECTION 11. TOXICOLOGICAL INFORMATION

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

Ingestion

Acute toxicity
Not classified based on available information.
Product:
Acute oral toxicity : Remarks: Not toxic, not known to be toxic, not expected to be toxic by Ingestion

Acute inhalation toxicity : Remarks: Not toxic, not known to be toxic, not expected to be toxic by Inhalation
Mild respiratory irritant

Components:
N-PHENYL-1-NAPHTHYLAMINE:
Acute oral toxicity : LD 50 (Rat, Male): ca. 1,625 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

Skin corrosion/irritation
Not classified based on available information.
Product:
Result: Not irritating to skin

Remarks: May cause skin irritation in susceptible persons.

Components:
OLEFINSULFIDE:
Result: Mildly irritating to skin

N-PHENYL-1-NAPHTHYLAMINE:
Species: Rabbit
Method: OECD Test Guideline 404
Result: Mildly irritating to skin

Serious eye damage/eye irritation
Not classified based on available information.
Product:
Result: Mildly irritating to eyes

Remarks: Unlikely to cause eye irritation or injury.

Components:
OLEFINSULFIDE:
Result: Mildly irritating to eyes

N-PHENYL-1-NAPHTHYLAMINE:
Result: Mildly irritating to eyes
Method: OECD Test Guideline 405

Respiratory or skin sensitisation
Skin sensitisation: May cause an allergic skin reaction.
Respiratory sensitisation: Not classified based on available information.
Components:
OLEFINSULFIDE:
Assessment: The product is a skin sensitiser, sub-category 1B.

N-PHENYL-1-NAPHTHYLAMINE:
Test Type: Maximisation Test (GPMT)
Species: Guinea pig
Assessment: May cause sensitisation by skin contact.
Method: OECD Test Guideline 406

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.
Components:
N-PHENYL-1-NAPHTHYLAMINE:
Exposure routes: Ingestion
Target Organs: Blood
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

Aspiration toxicity
Not classified based on available information.
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:

OLEFINSULFIDE:
Ecotoxicology Assessment
Acute aquatic toxicity : Harmful to aquatic life.

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

N-PHENYL-1-NAPHTHYLAMINE:
Toxicity to fish : LC 50 (Oncorhynchus mykiss (rainbow trout)): 0.44 - 0.74 mg/l
Exposure time: 96 h
Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : EC 50 (Water flea (Daphnia magna)): 0.3 - 0.68 mg/l
Exposure time: 48 h
Test Type: static test

Persistence and degradability

Components:

N-PHENYL-1-NAPHTHYLAMINE:
Biodegradability : Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301C

Bioaccumulative potential

Components:

N-PHENYL-1-NAPHTHYLAMINE:
Partition coefficient: n-octanol/water : log Pow: 4.20

Mobility in soil

Components:
No data available

Other adverse effects

No data available

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Harmful to aquatic life with long lasting effects.

Components:

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

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

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

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 : Acute Health Hazard

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

PROPRIETARY SYNTHETIC GEAR LUBRICANT	Not Assigned	90.00 - 100.00 %
MIXTURE OF OLEFIN SULFIDE, H2OP4 ESTER, AMINE SALTS, ALKYLSULFIDE, ALKENYLAMIDE AND OTHER INGREDIENTS	Not Assigned	10.00 - 20.00 %
OLEFINSULFIDE	68937-96-2	5.00 - 10.00 %

New Jersey Right To Know

PROPRIETARY SYNTHETIC GEAR LUBRICANT	Not Assigned	90.00 - 100.00 %

MIXTURE OF OLEFIN SULFIDE, H2OP4 ESTER, AMINE SALTS, ALKYLSULFIDE, ALKENYLAMIDE AND OTHER INGREDIENTS	Not Assigned	10.00 - 20.00 %
OLEFINSULFIDE	68937-96-2	5.00 - 10.00 %

California Prop 65 WARNING! This product contains a chemical known to the State of California to cause cancer.
2-NAPHTHALENAMINE 91-59-8

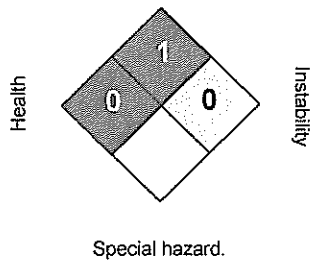
The components of this product are reported in the following inventories:

TSCA	:	On TSCA Inventory
DSL	:	This product contains the following components listed on the Canadian NDSL. All other components are on the Canadian DSL.
AUSTR	:	Not in compliance with the inventory
NZIOC	:	Not in compliance with the inventory
ENCS	:	Not in compliance with the inventory
KECL	:	Not in compliance with the inventory
PICCS	:	Not in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory

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: 05/22/2015

NFPA:	HMIS III:
	HEALTH 1 FLAMMABILITY 1 PHYSICAL HAZARD 0 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.

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H373	May cause damage to organs through prolonged or repeated exposure if swallowed.
H412	Harmful to aquatic life with long lasting effects.

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

SAFETY DATA SHEET

Issue Date 16-Mar-2016 **Revision Date** 16-Jun-2015 **Version** 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier
Product Name Bactizyme Bioenzymatic Drain Cleaner/Maintainer

Other means of identification
Product Code NL044
Synonyms None

Details of the supplier of the safety data sheet
Company Name Nyco Products Company
5332 Dansher Road
Countryside, IL 60525
(708) 579-8100
nycoproducts.com

Emergency telephone number
Emergency Telephone Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This product has been classified in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Not classified
Acute toxicity - Dermal	Not classified

Label elements

Appearance Slightly hazy **Odor** Fresh & Clean

Precautionary Statements
Immediately call a POISON CENTER or doctor/physician
Specific Treatment (See Section 4 on the SDS)

Hazards not otherwise classified (HNOC)
Other Information
Unknown Acute Toxicity 0.1% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
Nonylphenol Ethoxylate	9016-45-9	1-5	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First aid measures

Skin Contact Wash off immediately with plenty of water. Wash skin with soap and water.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Inhalation Remove to fresh air.

Ingestion Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed

Symptoms Any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

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

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical
No Information available.

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 Ensure adequate ventilation, especially in confined areas.

Environmental precautions

Environmental precautions 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 Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering Controls Showers, Eyewash stations & Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses if handling large volume.

Skin and body protection Wear protective gloves and protective clothing if needed.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Slightly hazy Green
Color	Green
Odor	Fresh & Clean
Odor threshold	No Information available

Property	Values	Remarks • Method
pH	7.0 - 9.0	
Specific Gravity	1.00	
Viscosity	> 25 cP @ 25°C	
Melting point/freezing point	No Information available	
Flash point	None	
Boiling point / boiling range	210 °F	
Evaporation rate	No Information available	
Flammability (solid, gas)	No data 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	
Water solubility	Complete	
Partition coefficient	No Information available	
Autoignition temperature	No Information available	
Decomposition temperature	No Information available	

Other Information

Density Lbs/Gal	8.33
VOC Content (%)	Not Applicable

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
Extremes of temperature and direct sunlight.
Incompatible materials
None known based on information supplied.
Hazardous Decomposition Products
None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information Maybe harmful by inhalation, ingestion, in contact with eyes and skin,

Inhalation Inhalation of vapors in high concentration may cause irritation of respiratory system.

Eye contact Contact with eyes may cause irritation.

Skin Contact Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Ingestion May cause gastro intestinal irritation.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Nonylphenol Ethoxylate 9016-45-9	= 2590 mg/kg (Rat) = 1310 mg/kg (Rat)	= 1780 µL/kg (Rabbit) = 2 mL/kg (Rabbit)	-

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 The table below indicates whether each agency has listed any ingredient as a carcinogen.
IARC (International Agency for Research on Cancer)
Group 2A - Probably Carcinogenic to Humans
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present
Reproductive toxicity No Information available.
STOT - single exposure No Information available.
STOT - repeated exposure No Information available.
Aspiration hazard No Information available.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity 0.1% of the mixture consists of ingredient(s) of unknown toxicity

12. ECOLOGICAL INFORMATION

Ecotoxicity

0.1% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Nonylphenol Ethoxylate 9016-45-9	-	5: 96 h Fish mg/L LC50	-
Tetrasodium EDTA 64-02-8	1.01: 72 h Desmodesmus subspicatus mg/L EC50	59.8: 96 h Pimephales promelas mg/L LC50 static 41: 96 h Lepomis macrochirus mg/L LC50 static	610: 24 h Daphnia magna mg/L EC50

Persistence and degradability
No Information available.

Bioaccumulation
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.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. TRANSPORT INFORMATION

The basic description below is specific to the container size. This information is provided for at a glance DOT information. Please refer to the container and/or shipping papers for the appropriate shipping description before tendering this material for shipment. For additional information, please contact the distributor listed in section 1 of this SDS.

DOT Not regulated

TDG Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

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	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No

Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

U.S. EPA Label Information
EPA Pesticide Registration Number Not Applicable

16. OTHER INFORMATION

NFPA	**Health hazards** 0	**Flammability** 0	**Instability** 0	**Physical and Chemical Properties** Yes
HMIS	**Health hazards** 0	**Flammability** 0	**Physical hazards** 0	**Personal protection** B

Issue Date 16-Mar-2016
Revision Date 16-Jun-2015
Revision Note
No Information available
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

1 - Identification

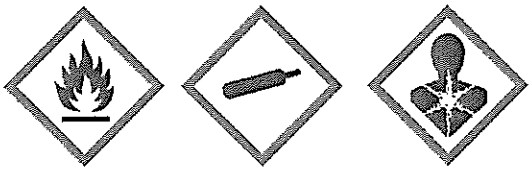
Product Name: WD-40 Multi-Use Product Aerosol *NOT FOR SALE IN CALIFORNIA* **Product Use: Lubricant, Penetrant, Drives Out Moisture, Removes and Protects Surfaces From Corrosion** **Restrictions on Use: None identified** **SDS Date Of Preparation: 07/20/2014**	**Manufacturer: WD-40 Company** **Address: 1061 Cudahy Place (92110)** **P.O. Box 80607** **San Diego, California, USA** **92138 –0607** **Telephone:** **Emergency only: 1-888-324-7596 (PROSAR)** **Information: 1-888-324-7596** **Chemical Spills: 1-800-424-9300 (Chemtrec)** **1-703-527-3887 (International Calls)**

2 – Hazards Identification

Hazcom 2012/GHS Classification:
Flammable Aerosol Category 1
Gas Under Pressure: Compressed Gas
Aspiration Toxicity Category 1

Note: This product is a consumer product and is labeled in accordance with the US Consumer Product Safety Commission regulations which take precedence over OSHA Hazard Communication labeling. The actual container label will not include the label elements below. The labeling below applies to industrial/professional products.

Label Elements:



DANGER!
Extremely Flammable Aerosol.
Contains gas under pressure; may explode if heated.
May be fatal if swallowed and enters airways.
Prevention
Keep away from heat, sparks, open flames, hot surfaces – No smoking.
Do not spray on an open flame or other ignition source.
Pressurized container: Do not pierce or burn, even after use.
Response
IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.
Storage
Store locked up.
Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Store in a well-ventilated place.
Disposal
Dispose of contents and container in accordance with local and national regulations.

3 - Composition/Information on Ingredients

Ingredient	CAS #	Weight Percent	US Hazcom 2012/ GHS Classification
Aliphatic Hydrocarbon	64742-47-8	45-50	Flammable Liquid Category 3

			Aspiration Toxicity Category 1
Petroleum Base Oil	64742-56-9 64742-65-0 64742-53-6 64742-54-7 64742-71-8	<25	Not Hazardous
LVP Aliphatic Hydrocarbon	64742-47-8	12-18	Aspiration Toxicity Category 1
Carbon Dioxide	124-38-9	2-3	Simple Asphyxiant Gas Under Pressure, Compressed Gas
Non-Hazardous Ingredients	Mixture	<10	Not Hazardous

Note: The exact percentages are a trade secret.

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.
Signs and Symptoms of Exposure: May cause eye and respiratory irritation. Inhalation may cause coughing, headache and dizziness. Skin contact may cause drying of the skin.
Indication of Immediate Medical Attention/Special Treatment Needed: Immediate medical attention is needed for ingestion.

5 – Fire Fighting Measures

Suitable (and unsuitable) 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.
Specific Hazards Arising from the Chemical: Contents under pressure. Keep away from ignition sources and open flames. Exposure of containers to extreme heat and flames can cause them to rupture often with violent force. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back. Combustion will produce oxides of carbon and hydrocarbons.
Special Protective Equipment and Precautions for Fire-Fighters: Firefighters should always wear positive pressure self-contained breathing apparatus and full protective clothing. Cool fire-exposed containers with water. Use shielding to protect against bursting containers.

6 – Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Wear appropriate protective clothing (see Section 8). Eliminate all sources of ignition and ventilate area.
Methods and Materials for Containment/Cleanup: Leaking cans should be placed in a plastic bag or open pail until the pressure has dissipated. 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

Precautions for Safe Handling: Avoid contact with eyes. Avoid prolonged contact with skin. Avoid breathing vapors or aerosols. Use only with adequate ventilation. Keep away from heat, sparks, pilot lights, hot surfaces and open flames. Unplug electrical tools, motors and appliances before spraying or bringing the can near any source of electricity. Electricity can burn a hole in the can and cause contents to burst into flames. To avoid serious burn injury, do not let the can touch battery terminals, electrical connections on motors or appliances or any other source of electricity. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Keep out of the reach of children. Do not puncture, crush or incinerate containers, even when empty.

Conditions for Safe Storage: Store in a cool, well-ventilated area, away from incompatible materials Do not store above 120°F or in direct sunlight. U.F.C (NFPA 30B) Level 3 Aerosol. Store away from oxidizers.

8 – Exposure Controls/Personal Protection

Chemical	Occupational Exposure Limits
Aliphatic Hydrocarbon	1200 mg/m3 TWA (manufacturer recommended)
Petroleum Base Oil	5 mg/m3 TWA, 10 mg/m3 STEL ACGIH TLV 5 mg/m3 TWA OSHA PEL
LVP Aliphatic Hydrocarbon	1200 mg/m3 TWA (manufacturer recommended)
Carbon Dioxide	5000 ppm TWA (OSHA/ACGIH), 30,000 ppm STEL (ACGIH)
Non-Hazardous Ingredients	None Established

The Following Controls are Recommended for Normal Consumer Use of this Product
Appropriate Engineering Controls: Use in a well-ventilated area.
Personal Protection:
Eye Protection: Avoid eye contact. Always spray away from your face.
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
Appropriate 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

Appearance:	Light amber liquid	Flammable Limits: (Solvent Portion)	LEL: 0.6% UEL: 8%
Odor:	Mild petroleum odor	Vapor Pressure:	95-115 PSI @ 70°F
Odor Threshold:	Not established	Vapor Density:	Greater than 1 (air=1)
pH:	Not Applicable	Relative Density:	0.8 – 0.82 @ 60°F
Melting/Freezing Point	Not established	Solubilities:	Insoluble in water
Boiling Point/Range:	361 - 369°F (183 - 187°C)	Partition Coefficient; n-octanol/water:	Not established
Flash Point:	122°F (49°C) Tag Closed Cup (concentrate)	Autoignition Temperature:	Not established
Evaporation Rate:	Not established	Decomposition Temperature:	Not established
Flammability (solid, gas)	Flammable Aerosol	Viscosity:	2.79-2.96 cSt @ 100°F
VOC:	412 grams/liter (49.5%)	Pour Point:	-63°C (-81.4°F) ASTM D-97

10 – Stability and Reactivity

Reactivity: Not reactive under normal conditions
Chemical Stability: Stable

Possibility of Hazardous Reactions: May react with strong oxidizers generating heat.
Conditions to Avoid: Avoid heat, sparks, flames and other sources of ignition. Do not puncture or incinerate containers.
Incompatible Materials: Strong oxidizing agents.
Hazardous Decomposition Products: Carbon monoxide and carbon dioxide.

11 – Toxicological Information

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.
Carcinogen Status: None of the components are listed as a carcinogen or suspect carcinogen by IARC, NTP, ACGIH or OSHA.
Reproductive Toxicity: None of the components is considered a reproductive hazard.

Numerical Measures of Toxicity:
The oral toxicity of this product is estimated to be greater than 5,000 mg/kg and the dermal toxicity greater than 2,000 mg/kg based on an assessment of the ingredients. This product is not classified as toxic by established criteria. It is an aspiration hazard.

12 – Ecological Information

Ecotoxicity: No specific aquatic toxicity data is currently available, however components of this product are not expected to be harmful to aquatic organisms
Persistence and Degradability: Component are readily biodegradable.
Bioaccumulative Potential: Bioaccumulation is not expected based on an assessment of the ingredients.
Mobility in Soil: No data available
Other Adverse Effects: None known

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. Do not puncture or incinerate containers, even empty. Dispose in accordance with federal, state, and local regulations.

14 – Transportation Information

DOT Surface Shipping Description:
UN1950, Aerosols, 2.1 Ltd. Qty (Note: Shipping Papers are not required for Limited Quantities unless transported by air or vessel – each package must be marked with the Limited Quantity Mark)
IMDG Shipping Description: Un1950, Aerosols, 2.1, LTD QTY
ICAO Shipping Description: UN1950, Aerosols, flammable, 2.1 NOTE: WD-40 does not test aerosol cans to assure that they meet the pressure and other requirements for transport by air. We do not recommend that our aerosol products be transported by air.

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, Sudden Release of Pressure
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.
VOC Regulations: This product complies with the consumer product VOC limits of the US EPA and states adopting the OTC VOC rules but does not comply with CARB.
California Safe Drinking Water and Toxic Enforcement Act (Proposition 65): This product does not contain chemicals regulated under California Proposition 65.
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 A (Compressed gas), Class B-5 (Flammable Aerosol)
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 – 4 (severe hazard), Reactivity – 0 (minimal hazard)

Revision Date: July 20, 2014 Supersedes: May 23, 2014

Revision Summary: Convert to Hazcom 2012. Changes in all sections.

Prepared by: Industrial Health & Safety Consultants, Inc. Shelton, CT, USA

APPROVED By: I. Kowalski Regulatory Affairs Dept.

5049000/No.0015205

MSDS No. 890

MATERIAL SAFETY DATA SHEET

Warren Unilube, Inc.

Address: 915 E. Jefferson Ave.
West Memphis, AR 72301

Phone: (800) 428-9284

Chemtrec Number:
Domestic: (800) 424-9300
International: (703) 527-3887

PRODUCT IDENTIFICATION

Trade Name: Wearever Brake Fluid DOT 3

Date Revised: August 19, 2009

Synonyms/product Code: N.A.
Chemical Name: N.A.
DOT Hazard Class: Not Applicable

NFPA Codes: Health=2, Flammability=1, Reactivity=0

COMPOSITION

			Occupational Exposure Limits*			
Product	CAS Number	Wt%	OSHA PEL	ACGIH TLV	Other	Units
Wearever Brake Fluid DOT 3	Mixture	100	N.A.	N.A.		
Ingredient(s):						
Blend of various glycol ethers, glycol and polyglycol	N.A.-P	100	N.A.	N.A.	N.A.	PPM

* = 8-Hr. TWA unless otherwise specified.
** = As mineral oil Mist
*** = All ingredients in this product are listed in the T.S.C.A. Inventory.
N.A. = Not Available
N.A.-P = Information is claimed proprietary by supplier.
STEL = Short Term Exposure Limit; 15 minutes.

PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point 760 mmHg:	401°F	Melting Point: N.A.
Vapor Pressure mmHg @ 20C	<0.1	Vapor Density (air=1): N.A.
Solubility in H_2O %:	Soluble	pH: N.A.
Specific Gravity (H_2O):	1.02-1.04	Evaporation Rate (ethyl ether =1): N.A.
% Volatile by Volume:	N.A.	Odor: Mild ether odor
Viscosity (method, temp):	N.A.	Appearance: Colorless to yellow

N.A. = Not Available

FIRE AND EXPLOSION DATA

Flash Point:	>200F
Flammable Limits in Air % by Vol.	Lower: N.A. Upper: N.A.
Autoignition Temperature:	N.A.
Extinguishing Media:	Dry chemical, foam, carbon dioxide.
Special Fire Fighting Procedure:	Water spray may be used to keep fire-exposed containers cool, preventing pressure build-up and explosion. Firefighters should wear self-contained breathing apparatus.
Unusual Fire or Explosion Hazard:	May ignite when sufficient heat is applied.

REACTIVITY DATA

Stability:	Stable
Hazardous Polymerization:	Will not occur.
Conditions to Avoid/Incompatibility:	Strong oxidizing agents, heat, spark, flame and build-up of static electricity.
Hazardous Decomposition Products:	Carbon monoxide, carbon dioxide, water and/or oxygenated hydrocarbons.

HEALTH HAZARD DATA

This product has not been tested as a whole to determine its specific health hazards. The information provided in this section is based on health hazard information on the product components.

Carcinogenicity: NTP: No IARC Monographs: No OSHA Regulated: No
Occupational Exposure Limits: See COMPOSITION section.

Effects of Overexposure:

Acute:

Eyes:	May cause severe eye irritation and chemical burns.
Skin:	Slightly irritating to the skin. Harmful amounts may be absorbed through the skin with extensive and prolonged contact.
Inhalation:	Exposure to vapors or mist may result in irritation of the respiratory tract, headache, drowsiness and dizziness. High concentrations of ethylene glycol ethers may be lethal.
Ingestion:	May cause irritation of the mouth, throat, and the respiratory tract, abdominal discomfort, dizziness, lumbar pain, CNS depression, kidney and liver damage.

Chronic: Prolonged or repeated skin contact may result in toxic amounts being absorbed through the skin.

Additional Medical and Toxicological Information:

Persons with preexisting respiratory, liver, kidney, eye or skin diseases may be adversely affected by this product. Ethylene glycol and ethylene glycol ethers have produced dose-related teratogenic effects and maternal toxicity in laboratory animals. Exposure to vapors of ethylene glycol ethers have caused testicular atrophy in laboratory animals.

EMERGENCY FIRST AID PROCEDURES

Eye Contact:	Flush thoroughly with large amounts of water for at least 15 minutes, including under the eyelids. Contact a physician immediately, preferably an Ophthalmologist. Speed and thoroughness in rinsing eyes are important to avoid permanent injury.
Skin Contact:	Remove contaminated clothing. Wash affected areas with soap and water. If irritation occurs, get medical help. Discard contaminated shoes.
Inhalation:	Remove to fresh air. Apply artificial respiration if not breathing. Get medical attention.
Ingestion:	Do not induce vomiting. Get immediate medical attention.

SPECIAL PROTECTION INFORMATION

Eye Protection:	Remove contact lenses and wear chemical safety goggles where contact with liquid or mist may occur.
Skin Protection:	Wear impervious gloves when contact with skin may occur. Use face shields where splashing may occur. Wash with soap and water before eating, drinking or smoking. Launder contaminated clothing before reuse. Discard contaminated shoes.
Inhalation:	Use approved respiratory protective equipment for cleaning large spills or entry into large tanks, vessels or other confined spaces or in situations where exposure may exceed occupational exposure levels. Avoid inhalation of vapors or mists generated by heating or violent agitation of this product.
Ventilation:	Provide adequate ventilation 1) to keep mist or vapors below occupational exposure levels and 2) to prevent the formation of an oxygen deficient atmosphere, particularly in a confined space area.

SPILL OR LEAK AND DISPOSAL PROCEDURES

Spill Procedures: Remove sources of heat or ignition including internal combustion engines and power tools. Remove spill with vacuum trucks or pump and soak up residue with and absorbent. Use approved respirator where occupational exposure limits may be exceeded.

Waste Disposal: Dispose through a licensed waste disposal company. Follow federal, state and local regulation.

SPECIAL PRECAUTIONS AND COMMENTS

Storage Requirements: Store in tightly closed containers in an dry cool place, away from incompatible materials or sources of heat, ignition or strong oxidizers. Ground and bond all transfer and storage equipment. Empty containers may contain residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, puncture, incinerate, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks or other sources of ignition.

SARA TITLE III INFORMATION

Acute	Chronic	Fire	Pressure	Reactive
X	X			

SARA Hazardous Substances

Ingredient	CAS NO.	%, WT	Sec 313	Sec 302	RQ, lb	TPQ, lb
Ethylene glycol	110-80-5	N.A.	X			
Glycol Ethers	Various	>75	X			

Key: Sec 313 = Toxic Chemicals, Section 313
Sec 302 = Extremely Hazardous Substances (EHS)
RQ = Reportable Quantity of EHS
TPQ = Threshold Planning Quantity of EHS

CALIFORNIA PROPOSITION 65 WARNING

Chemicals known to the State of California to cause cancer, birth defects or other reproductive harm may be found in the petroleum products. Although it is possible to sufficiently refine the petroleum products to remove the potential for cancer, we are advising that one or more of the listed chemicals may be present in some detectable quantities. Read and follow directions and use care when handling these petroleum products.

SAFETY DATA SHEET

1. Identification

Product identifier	**Propane**
Other means of identification	
SDS number	WC002
Product code	UN1075
Recommended use	Portable fuel.
Recommended restrictions	None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer/Supplier	Worthington Cylinder Corporation
Address	300 E. Breed St., Chilton, WI 5301 United States
Contact person	Ann Stiefvater
E-mail address	Ann.Stiefvater@worthingtonindustries.com
Telephone number	1-920-849-1740
Emergency telephone number	1-703-527-3887 International / CHEMTREC 1-800-424-9300 Domestic

2. Hazard(s) identification

Physical hazards	Flammable gases	Category 1
	Gases under pressure	Liquefied gas
Health hazards	Not classified.	
OSHA defined hazards	Not classified.	

Label elements

Signal word	Danger
Hazard statement	Extremely flammable gas. Contains gas under pressure; may explode if heated.
Precautionary statement	
Prevention	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Response	Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.
Storage	Protect from sunlight. Store in a well-ventilated place.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC)	May displace oxygen and cause rapid suffocation.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Propane	74-98-6	87.5-100
Ethane	74-84-0	0-7
Propylene	115-07-1	0-5
Butane	106-97-8	0-2.5

Additives

Chemical name	CAS number	%
Ethyl Mercaptan	75-08-1	<0.005

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician or poison control center immediately.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation develops and persists. If frostbite occurs, immerse involved area in warm water (between 100 F/38 C and 110 F/43 C, not exceeding 112 F/44 C). Keep immersed for 20 to 40 minutes. Seek medical assistance.

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 immediately.

Ingestion Ingestion is not a typical route of exposure for gases or liquefied gases.

Most important symptoms/effects, acute and delayed Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite ("cold burn"). Very high exposure can cause suffocation from lack of oxygen. May cause drowsiness or dizziness.

Indication of immediate medical attention and special treatment needed Exposure may aggravate pre-existing respiratory disorders. Treat symptomatically.

General information 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, water spray, fog, or foam.

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.

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 Move container from fire area if it can be done without risk.

Do not extinguish fires unless gas flow can be stopped safely; explosive re-ignition may occur. Promptly isolate the scene by removing all persons from the vicinity of the incident. No action shall be taken involving any personal risk or without suitable training. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus. Stop flow of material. Use water to keep fire exposed containers cool and to protect personnel effecting shutoff. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop leak. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply.

General fire hazards Extremely flammable gas.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Evacuate the area promptly. No action shall be taken involving any personal risk or without suitable training. Keep unnecessary personnel away.

Ensure adequate ventilation. In case of inadequate ventilation, use respiratory protection. Wear appropriate personal protective equipment (See Section 8).

Methods and materials for containment and cleaning up Ventilate well, stop flow of gas or liquid if possible. Immediately contact emergency personnel.

Environmental precautions Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent from entering into soil, ditches, sanitary sewers, waterways and/or groundwater.

7. Handling and storage

Precautions for safe handling Eliminate all sources of ignition. Wear appropriate personal protective equipment (See Section 8). Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored, and processed. Do not breathe gas. Do not get in eyes, on skin, on clothing. Use only with adequate ventilation.

Conditions for safe storage, including any incompatibilities

Store in accordance with local, regional, national, and international regulations. Secure cylinders in an upright position at all times, close all valves when not in use. Store in a cool, dry, well-ventilated place. Keep container tightly closed and sealed until ready for use. Protect cylinders from damage.

8. Exposure controls/personal protection

Occupational exposure limits

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

Components	Type	Value
Propane (CAS 74-98-6)	PEL	1800 mg/m3 1000 ppm
Additives	**Type**	**Value**
Ethyl Mercaptan (CAS 75-08-1)	Ceiling	25 mg/m3 10 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Butane (CAS 106-97-8)	STEL	1000 ppm
Propylene (CAS 115-07-1)	TWA	500 ppm
Additives	**Type**	**Value**
Ethyl Mercaptan (CAS 75-08-1)	TWA	0.5 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Butane (CAS 106-97-8)	TWA	1900 mg/m3 800 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3 1000 ppm
Additives	**Type**	**Value**
Ethyl Mercaptan (CAS 75-08-1)	Ceiling	1.3 mg/m3 0.5 ppm

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Provide adequate ventilation and minimize the risk of inhalation of gas. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear approved safety glasses or goggles.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves.

Other

Wear protective clothing appropriate for the risk of exposure.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards

Contact with liquefied gas might cause frostbites, in some cases with tissue damage. Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Do not eat, drink or smoke when using the product. Wash thoroughly after handling. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practices.

9. Physical and chemical properties

Appearance

Colorless gas.

Physical state

Gas.

Form

Compressed liquefied gas.

Color

Colorless.

Odor

Rotten egg.

Odor threshold	Not available.
pH	Not applicable.
Melting point/freezing point	-306.4 °F (-188 °C)
Initial boiling point and boiling range	-43.6 °F (-42 °C) 14.7 psia
Flash point	-155.2 °F (-104.0 °C)
Evaporation rate	Not applicable.
Flammability (solid, gas)	Extremely flammable gas.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	2.15 %
Explosive limit - upper (%)	9.6 %
Vapor pressure	127 psig (21°C / 70°F)
Vapor density	Not available.
Relative density	0.504 (liquid) 1.5 (vapor) (air=1) @ 15°C / 60°F
Solubility(ies)	
Solubility (water)	Slightly soluble in water.
Partition coefficient (n-octanol/water)	1.77
Auto-ignition temperature	809.6 °F (432 °C)
Decomposition temperature	Not available.
Viscosity	Not applicable.
Other information	
Molecular weight	45 g/mol
Percent volatile	100 %

10. Stability and reactivity

Reactivity	Reacts violently with strong oxidants, nitrites, inorganic chlorides, chlorites and perchlorates causing fire and explosion hazard.
Chemical stability	Stable under normal temperature conditions and recommended use.
Possibility of hazardous reactions	Polymerization will not occur.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Strong oxidizing agents. Strong acids. Halogens.
Hazardous decomposition products	Carbon oxides. Hydrocarbons.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Not likely, due to the form of the product.
Inhalation	High concentrations: Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels. Breathing of high concentrations may cause dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness.
Skin contact	Contact with liquefied gas may cause frostbite.
Eye contact	Contact with liquefied gas may cause frostbite.
Symptoms related to the physical, chemical and toxicological characteristics	Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite ("cold burn"). Very high exposure can cause suffocation from lack of oxygen. May cause drowsiness or dizziness.

Information on toxicological effects

Acute toxicity	High concentration: Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels.

Components	Species	Test Results
Butane (CAS 106-97-8)		
Acute		
Inhalation		
LC50	Mouse	680 mg/l, 2 Hours
	Rat	658 mg/l, 4 Hours
Propane (CAS 74-98-6)		
Acute		
Inhalation		
LC50	Rat	> 1442 mg/l, 15 Minutes
Propylene (CAS 115-07-1)		
Acute		
Inhalation		
LC50	Mouse	680 mg/l, 2 Hours
	Rat	658 mg/l, 4 Hours

Additives	Species	Test Results
Ethyl Mercaptan (CAS 75-08-1)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg
Inhalation		
LC50	Mouse	4420 mg/l, 4 Hours
Oral		
LD50	Rat	682 mg/kg

Skin corrosion/irritation Contact with liquefied gas might cause frostbites, in some cases with tissue damage.

Serious eye damage/eye irritation Direct contact with liquefied gas may cause eye damage from frostbite.

Respiratory or skin sensitization

Respiratory sensitization Not classified.

Skin sensitization Not classified.

Germ cell mutagenicity Not classified.

Carcinogenicity Not classified.

IARC Monographs. Overall Evaluation of Carcinogenicity

Propylene (CAS 115-07-1) 3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity Not classified.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not classified.

12. Ecological information

Ecotoxicity Not expected to be harmful to aquatic organisms.

Persistence and degradability The product is readily biodegradable.

Bioaccumulative potential The product is not expected to bioaccumulate.

Partition coefficient n-octanol / water (log Kow)

Propane (CAS Mixture)	1.77
Butane (CAS 106-97-8)	2.89
Propane (CAS 74-98-6)	2.36
Propylene (CAS 115-07-1)	1.77

Mobility in soil May evaporate quickly.

Mobility in general May evaporate quickly.

Other adverse effects	None known.

13. Disposal considerations

Disposal instructions	Use the container until empty. Do not dispose of any non-empty container. Empty containers have residual vapor that is flammable and explosive. Cylinders should be emptied and returned to a hazardous waste collection point. Do not puncture or incinerate even when empty. Dispose in accordance with all applicable regulations.
Hazardous waste code	D001: Waste Flammable material with a flash point <140 °F
Waste from residues / unused products	Dispose in accordance with all applicable regulations.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN1075
UN proper shipping name	Petroleum Gases, liquefied
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	19, T50
Packaging exceptions	306
Packaging non bulk	304
Packaging bulk	314, 315

IATA

UN number	UN1075
UN proper shipping name	Petroleum Gases, liquefied
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	No
ERG Code	10L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1075
UN proper shipping name	Petroleum Gases, liquefied
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No
EmS	F-D, S-U
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	This product is a compressed or liquefied gas and when transported in bulk is covered under IGC code.

15. Regulatory information

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

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.

CERCLA Hazardous Substance List (40 CFR 302.4)

Butane (CAS 106-97-8)	LISTED
Ethyl Mercaptan (CAS 75-08-1)	LISTED
Propane (CAS 74-98-6)	LISTED
Propylene (CAS 115-07-1)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - Yes
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Propylene	115-07-1	0-5

Other federal regulations

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

Not regulated.

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

Butane (CAS 106-97-8)
Ethyl Mercaptan (CAS 75-08-1)
Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

Clean Water Act (CWA) Section 112(r) (40 CFR 68.130) Hazardous substance

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Butane (CAS 106-97-8)
Ethyl Mercaptan (CAS 75-08-1)
Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

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

Butane (CAS 106-97-8)
Ethyl Mercaptan (CAS 75-08-1)
Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

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

Butane (CAS 106-97-8)
Ethyl Mercaptan (CAS 75-08-1)
Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

US. Rhode Island RTK

Butane (CAS 106-97-8)
Ethyl Mercaptan (CAS 75-08-1)
Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

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 this product complies 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).

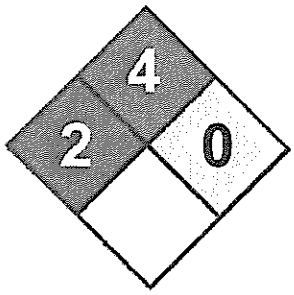
16. Other information, including date of preparation or last revision

Issue date 05-May-2014

Revision date 25-March-2015

Version # 03

NFPA Ratings



Disclaimer All information in this Material Safety Data Sheet is believed to be accurate and reliable. However, no guarantee or warranty of any kind is made with regard to the accuracy of information or the suitability of the recommendations contained herein. It is the user's responsibility to assess the safety and toxicity of this product under their own conditions of use and to comply with all applicable laws and regulations.

Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), and OSHA GHS

Printing date 13.11.2015 Revision: 13.11.2015

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

· **1.1 Product identifier**

· **Trade name: Bead Sealer**

· **Article number:** 14-101, 14-101A, 14-101B, 14-104, 14-104A, 14-104B

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.

· **Application of the substance / the mixture:** Sealant

· **1.3 Details of the supplier of the Safety Data Sheet**

· **Manufacturer/Supplier:**
31 Incorporated
100 Enterprise Dr.
Newcomerstown, OH 43832
Phone: (740) 498-8324

· **1.4 Emergency telephone number:**
ChemTel Inc.
+1 (800)255-3924, +1 (813)248-0585

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H361d, H400, H410.
The following classifications are applicable only to OSHA (USA) regulations and not the specific CLP regulation: H361.


Repr. 2 H361: Suspected of damaging fertility or the unborn child.


flame

Flam. Liq. 2	H225	Highly flammable liquid and vapour.


health hazard

Repr. 2	H361d	Suspected of damaging the unborn child. Route of exposure: Inhalation.
STOT RE 2	H373	May cause damage to the central nervous system through prolonged or repeated exposure. Route of exposure: Inhalation.


environment

Aquatic Acute 1	H400	Very toxic to aquatic life.
Aquatic Chronic 1	H410	Very toxic to aquatic life with long lasting effects.

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Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2	H319	Causes serious eye irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.
STOT SE 3	H336	May cause drowsiness or dizziness.

· **Additional information:**
0 % of the mixture consists of component(s) of unknown toxicity.
There are no other hazards not otherwise classified that have been identified.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the Globally Harmonized System within the United States (GHS).
The product is classified and labelled according to the CLP regulation.
· **Hazard pictograms**
The following pictogram(s) are only for use within Europe: GHS09.

GHS02 GHS07 GHS08 GHS09

· **Signal word** Danger

· **Hazard-determining components of labelling:**
toluene
natural rubber latex
heptane
· **Hazard statements**
The following Hazard Statements are applicable only to the general GHS regulations and not the specific CLP regulation: H361.
H361: Suspected of damaging fertility or the unborn child.
The following Hazard Statements are applicable only to the EU regulations and not the US GHS regulation: H361d, H410.
H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H361d Suspected of damaging the unborn child. Route of exposure: Inhalation.
H336 May cause drowsiness or dizziness.
H373 May cause damage to the central nervous system through prolonged or repeated exposure. Route of exposure: Inhalation.
H410 Very toxic to aquatic life with long lasting effects.
· **Precautionary statements**
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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P260	Do not breathe mist/vapours/spray.
P264	Wash thoroughly after handling.
P280	Wear protective gloves / eye protection / face protection.
P233	Keep container tightly closed.
P243	Take precautionary measures against static discharge.
P271	Use only outdoors or in a well-ventilated area.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P370+P378	In case of fire: Use foam, powder, or carbon dioxide for extinction.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P314	Get medical advice/attention if you feel unwell.
P362+P364	Take off contaminated clothing and wash it before reuse.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **NFPA ratings (scale 0 - 4)**

Health = 2
Fire = 3
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = *2
Fire = 3
Reactivity = 0

* - Indicates a long term health hazard from repeated or prolonged exposures.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 108-88-3 EINECS: 203-625-9 Index number: 601-021-00-3	toluene Flam. Liq. 2, H225 Repr. 2, H361d; STOT RE 2, H373; Asp. Tox. 1, H304 Skin Irrit. 2, H315; STOT SE 3, H336	50-100%

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CAS: 142-82-5 EINECS: 205-563-8 Index number: 601-008-00-2	heptane Flam. Liq. 2, H225 Asp. Tox. 1, H304 Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Skin Irrit. 2, H315; STOT SE 3, H336	25-50%
CAS: 9006-04-6 EINECS: 232-689-0	natural rubber latex Skin Sens. 1B, H317	<10%

· **Additional information:**
For the wording of the listed Hazard Statements refer to section 16.
For the listed ingredient(s), the identity and exact percentages are being withheld as a trade secret.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Take affected persons out into the fresh air.
· **After inhalation:**
Supply fresh air; consult doctor in case of complaints.
Provide oxygen treatment if affected person has difficulty breathing.
In case of irregular breathing or respiratory arrest provide artificial respiration.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation is experienced, consult a doctor.
· **After eye contact:**
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:**
Rinse out mouth and then drink plenty of water.
A person vomiting while laying on their back should be turned onto their side.
Do not induce vomiting; call for medical help immediately.
· **4.2 Most important symptoms and effects, both acute and delayed**
Headache
Dizziness
Coughing
Cramp
Nausea
Allergic reactions
Gastric or intestinal disorders when ingested.
Disorientation
· **Hazards**
Danger of convulsion.
Danger of impaired breathing.
Danger of disturbed cardiac rhythm.

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Condition may deteriorate with alcohol consumption.
May be harmful in contact with skin.
May be harmful if inhaled.
Repeated exposure may cause skin dryness or cracking.

· **4.3 Indication of any immediate medical attention and special treatment needed**
If necessary oxygen respiration treatment.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:**
Foam
Alcohol resistant foam
Fire-extinguishing powder
Carbon dioxide
Gaseous extinguishing agents
Water haze or fog
· **For safety reasons unsuitable extinguishing agents:** Water
· **5.2 Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
· **5.3 Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
· **Additional information** Eliminate all ignition sources if safe to do so.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources.
Protect from heat.
· **6.2 Environmental precautions:**
Do not allow to enter sewers/ surface or ground water.
Inform respective authorities in case of seepage into water course or sewage system.
· **6.3 Methods and material for containment and cleaning up:**
Allow to solidify. Pick up mechanically.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Pick up mechanically.
Send for recovery or disposal in suitable receptacles.
Do not flush with water or aqueous cleansing agents
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling** Use only in well ventilated areas.
· **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Flammable gas-air mixtures may form in empty receptacles.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Store in a cool location.
Provide ventilation for receptacles.
Avoid storage near extreme heat, ignition sources or open flame.
· **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from oxidising agents.
· **Further information about storage conditions:**
Store in cool, dry conditions in well sealed receptacles.
Keep container tightly sealed.
· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see section 7.

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
108-88-3 toluene	
PEL (USA)	Short-term value: C 300; 500* ppm Long-term value: 200 ppm *10-min peak per 8-hr shift
REL (USA)	Short-term value: 560 mg/m³, 150 ppm Long-term value: 375 mg/m³, 100 ppm
TLV (USA)	Long-term value: 75 mg/m³, 20 ppm BEI
EL (Canada)	Long-term value: 20 ppm R
EV (Canada)	Long-term value: 20 ppm
142-82-5 heptane	
IOELV (EU)	Long-term value: 2085 mg/m³, 500 ppm

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PEL (USA)	Long-term value: 2000 mg/m³, 500 ppm
REL (USA)	Short-term value: C 1800* mg/m³, C 440* ppm Long-term value: 350 mg/m³, 85 ppm *15-min
TLV (USA)	Short-term value: 2050 mg/m³, 500 ppm Long-term value: 1640 mg/m³, 400 ppm
EL (Canada)	Short-term value: 500 ppm Long-term value: 400 ppm
EV (Canada)	Short-term value: 2,045 mg/m³, 500 ppm Long-term value: 1,635 mg/m³, 400 ppm
9006-04-6 natural rubber latex	
TLV (USA)	Long-term value: 0,0001* mg/m³ Skin; (SEN) NIC-DSEN, RSEN;* inh. fraction
EL (Canada)	Long-term value: 0,001 mg/m³ inhalable, Skin; S
EV (Canada)	Long-term value: 0,001 mg/m³ as total proteins, inhalable, Skin

· **DNELs** No further relevant information available.
· **PNECs** No further relevant information available.

· **Ingredients with biological limit values:**	
108-88-3 toluene	
BEI (USA)	0,02 mg/L Medium: blood Time: prior to last shift of workweek Parameter: Toluene 0,03 mg/L Medium: urine Time: end of shift Parameter: Toluene 0,3 mg/g creatinine Medium: urine Time: end of shift Parameter: o-Cresol with hydrolysis (background)

· **8.2 Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
Pregnant women should strictly avoid inhalation or skin contact.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.

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· **Respiratory protection:**
Not required under normal conditions of use.
For spills, respiratory protection may be advisable.
Use suitable respiratory protective device when high concentrations are present.
Use suitable respiratory protective device when aerosol or mist is formed.
· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
· **Eye protection:**

Safety glasses

· **Body protection:** Protective work clothing
· **Limitation and supervision of exposure into the environment**
No further relevant information available.
· **Risk management measures**
See Section 7 for additional information.
No further relevant information available.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Liquid
Colour:	Black
· **Odour:**	Solvent-like
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Not determined.
Boiling point/Boiling range:	99 °C (210 °F)
· **Flash point:**	-9 °C (16 °F) (TCC D56)
· **Flammability (solid, gaseous):**	Not applicable.
· **Auto/Self-ignition temperature:**	215 °C (419 °F)
· **Decomposition temperature:**	Not determined.
· **Self-igniting:**	Product is not self-igniting.

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· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/ vapour mixtures are possible.
· **Explosion limits:**	
Lower:	1,1 Vol %
Upper:	7,0 Vol %
· **Oxidising properties**	Not determined.
· **Vapour pressure at 20 °C (68 °F):**	48 hPa (36 mm Hg)
· **Density at 20 °C (68 °F):**	0,87 g/cm³ (7,26 lbs/gal)
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with water:**	Not miscible or difficult to mix.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic at 20 °C (68 °F):	721 mm²/s (Converted from 5 Zahn)
VOC content:	89,1 %
VOC (California)	75-90 % Wt
· **9.2 Other information**	No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
· **10.3 Possibility of hazardous reactions**
Used empty containers may contain product gases which form explosive mixtures with air.
Flammable.
Reacts violently with oxidising agents.
Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomised.
Toxic fumes may be released if heated above the decomposition point.
· **10.4 Conditions to avoid**
Keep ignition sources away - Do not smoke.
Store away from oxidising agents.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:**
Carbon dioxide
Carbon monoxide

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SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**		
108-88-3 toluene		
Oral	LD50	5000 mg/kg (rat)
Dermal	LD50	12124 mg/kg (rabbit)
Inhalative	LC50/4 h	5320 mg/l (mouse)
142-82-5 heptane		
Oral	LD50	> 5000 mg/kg (rat) (Estimate)
Inhalative	LC50/4 h	103 mg/l (rat)
1333-86-4 Carbon black		
Oral	LD50	10000 mg/kg (rat)

· **Primary irritant effect:**
· **Skin corrosion/irritation**
Causes skin irritation.
· **Serious eye damage/irritation**
Slight irritant effect on eyes.
Causes serious eye irritation.
· **Respiratory or skin sensitisation**
May cause an allergic skin reaction.
· **Acute effects (acute toxicity, irritation and corrosivity):**
Causes skin and eye irritation.
Vapours have narcotic effect.
· **Repeated dose toxicity:** Repeated exposures may result in skin and/or respiratory sensitivity.
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):**
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity**
Suspected of damaging the unborn child. Route of exposure: Inhalation.
· **STOT-single exposure**
May cause drowsiness or dizziness.
· **STOT-repeated exposure**
May cause damage to the central nervous system through prolonged or repeated exposure. Route of exposure: Inhalation.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** Toxic for aquatic organisms
· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.

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· **12.4 Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Avoid transfer into the environment.
Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Contact waste processors for recycling information.
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Can be burned with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.
· **Uncleaned packaging:**
· **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· **14.1 UN-Number**
· **DOT, ADR, IMDG, IATA** UN1133

· **14.2 UN proper shipping name**

Limited Quantity for packages less than 30 kg (66 lb) and inner packagings less than 5 L (1.3 gal).

· **DOT**	Adhesives
· **ADR**	1133 ADHESIVES, ENVIRONMENTALLY HAZARDOUS
· **IMDG**	ADHESIVES, MARINE POLLUTANT
· **IATA**	ADHESIVES

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· 14.3 Transport hazard class(es)

· DOT

· Class	3 Flammable liquids.
· Label	3

· ADR

· Class	3 (F1) Flammable liquids.
· Label	3

· IMDG

· Class	3 Flammable liquids.
· Label	3

· IATA

· Class	3 Flammable liquids.
· Label	3
· 14.4 Packing group	
· DOT, ADR, IMDG, IATA	II
· 14.5 Environmental hazards:	Product contains environmentally hazardous substances: heptane
· Marine pollutant:	Yes
· Special marking (ADR):	Symbol (fish and tree) Symbol (fish and tree)
· 14.6 Special precautions for user	Warning: Flammable liquids.
· Danger code (Kemler):	33
· EMS Number:	F-E,S-E
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.

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· Transport/Additional information:	
· ADR	
· Transport category	2
· Tunnel restriction code	D/E
· IATA	Limited quantity by air: 1L
· UN "Model Regulation":	UN 1133 ADHESIVES, 3, II

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **United States (USA)**
· **SARA**

· **Section 355 (extremely hazardous substances):**
None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

108-88-3	toluene

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

· **Proposition 65 (California):**
· **Chemicals known to cause cancer:**
References to chemical components listed below are based on unbound respirable particles and are not generally applicable to product as supplied.

1333-86-4	Carbon black

· **Chemicals known to cause reproductive toxicity for females:**

108-88-3	toluene

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

108-88-3	toluene

· **Carcinogenic Categories**

· **EPA (Environmental Protection Agency)**

108-88-3	toluene	II
142-82-5	heptane	D

· **IARC (International Agency for Research on Cancer)**

1333-86-4	Carbon black	2B
990001-01-0	toluene	3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

1333-86-4	Carbon black

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· **Canada**

· **Canadian Domestic Substances List (DSL)**
All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**
None of the ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 1%)**	
108-88-3	toluene
142-82-5	heptane

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I**
None of the ingredients are listed.

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**
None of the ingredients are listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**
H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H336 May cause drowsiness or dizziness.
H361d Suspected of damaging the unborn child. Route of exposure: Inhalation.
H373 May cause damage to the central nervous system through prolonged or repeated exposure. Route of exposure: Inhalation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)

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LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Skin Sens. 1B: Sensitisation - Skin, Hazard Category 1B
Repr. 2: Reproductive toxicity, Hazard Category 2
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2
Asp. Tox. 1: Aspiration hazard, Hazard Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

· **Sources**

SDS Prepared by:
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