



**Section IV. First Aid Measures**

<b>Eye Contact</b>	No effects expected. If irritation does occur, flush contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the chemical is removed. If irritation persists, obtain medical advice.
<b>Skin Contact</b>	Quickly and gently, blot or brush away excess chemical. Wash gently and thoroughly with water and non-abrasive soap for 5 minutes or until chemical is removed. Remove contaminated clothing, shoes and leather goods (e.g., watchbands, belts, etc.). If irritation persists, repeat flushing. Obtain medical advice immediately. Completely decontaminate clothing, shoes and leather goods before reuse or discard.
<b>Inhalation</b>	Remove source of contamination or move victim to fresh air. If irritation persists, obtain medical advice.
<b>Ingestion</b>	NEVER give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. DO NOT induce vomiting because of danger of aspirating liquid into lungs. Have victim drink 240 to 300 mL (8 to 10 oz) of water to dilute material in stomach. If vomiting occurs naturally, rinse mouth and repeat administration of water. Obtain medical attention.
<b>Note to Physician</b>	Not available

**Section V. Fire-fighting Measures**

<b>Flammability</b>	May be combustible at high temperature.	<b>Flammable Limits</b>	Not available
<b>Flash Points</b>	OPEN CUP: (Cleveland.) PHT9: $\geq 170^{\circ}\text{C}$ ( $\geq 338^{\circ}\text{F}$ ) PHT10: $\geq 166^{\circ}\text{C}$ ( $\geq 330.8^{\circ}\text{F}$ ) PHT15: $\geq 190^{\circ}\text{C}$ ( $\geq 374^{\circ}\text{F}$ ) PHT22: $\geq 180^{\circ}\text{C}$ ( $\geq 356^{\circ}\text{F}$ ) PHT32: $\geq 210^{\circ}\text{C}$ ( $\geq 410^{\circ}\text{F}$ ) PHT46: $\geq 210^{\circ}\text{C}$ ( $\geq 410^{\circ}\text{F}$ ) PHT68: $\geq 230^{\circ}\text{C}$ ( $\geq 446^{\circ}\text{F}$ ) PHT100: $\geq 240^{\circ}\text{C}$ ( $\geq 464^{\circ}\text{F}$ )	<b>Auto-Ignition Temperature</b>	Fire Point: PHT9: $198^{\circ}\text{C}$ ( $388.4^{\circ}\text{F}$ ) PHT10: $182^{\circ}\text{C}$ ( $359.6^{\circ}\text{F}$ ) PHT15: $196^{\circ}\text{C}$ ( $384.8^{\circ}\text{F}$ ) PHT22: $206^{\circ}\text{C}$ ( $402.8^{\circ}\text{F}$ ) PHT32: $231^{\circ}\text{C}$ ( $447.8^{\circ}\text{F}$ ) PHT46: $230^{\circ}\text{C}$ ( $446^{\circ}\text{F}$ ) PHT68: $250^{\circ}\text{C}$ ( $482^{\circ}\text{F}$ ) PHT100: $268^{\circ}\text{C}$ ( $514.4^{\circ}\text{F}$ )
<b>Fire Hazards in Presence of Various Substances</b>	Low fire hazard. This material must be heated before ignition will occur.	<b>Explosion Hazards in Presence of Various Substances</b>	Do not cut, weld, heat, drill or pressurize empty container. Containers may explode in heat of fire.
<b>Products of Combustion</b>	Carbon oxides (CO, CO <sub>2</sub> ), nitrogen oxides (NO <sub>x</sub> ), sulphur oxides (SO <sub>x</sub> ), phosphorus compounds (PO <sub>x</sub> ), oxides of zinc, smoke and irritating vapours as products of incomplete combustion.		
<b>Fire Fighting Media and Instructions</b>	NAERG2004, GUIDE 171, Substances (low to moderate hazard). If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (0.5 mile) in all directions; also, consider initial evacuation for 800 meters (0.5 mile) in all directions. Shut off fuel to fire if it is possible to do so without hazard. If this is impossible, withdraw from area and let fire burn out under controlled conditions. Withdraw immediately in case of rising sound from venting safety device or any discolouration of tank due to fire. Cool containing vessels with water spray in order to prevent pressure build-up, autoignition or explosion. SMALL FIRE: use DRY chemicals, foam, water spray or CO <sub>2</sub> . LARGE FIRE: use water spray, fog or foam. For small outdoor fires, portable fire extinguishers may be used, and self contained breathing apparatus (SCBA) may not be required. For all indoor fires and any significant outdoor fires, SCBA is required. Respiratory and eye protection are required for fire fighting personnel.		

**Section VI. Accidental Release Measures**

<b>Material Release or Spill</b>	Consult current National Emergency Response Guide Book (NAERG) for appropriate spill measures if necessary. Ensure clean-up personnel wear appropriate personal protective equipment. Extinguish all ignition sources. Stop leak if safe to do so. Dike spilled material. Use appropriate inert absorbent material to absorb spilled product. Collect used absorbent for later disposal. Avoid contact with spilled material. Avoid contaminating sewers, streams, rivers and other water courses with spilled material. Notify appropriate authorities immediately.
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**Section VII. Handling and Storage**

<b>Handling</b>	Avoid contact with any sources of ignition, flames, heat, and sparks. Avoid skin contact. Avoid eye contact. Avoid inhalation of product vapours or mists. Wear proper personal protective equipment (See Section 8). Empty containers may contain product residue. Do not pressurize, cut, heat, or weld empty containers. Do not reuse containers without commercial cleaning and/or reconditioning. Personnel who handle this material should practice good personal hygiene during and after handling to help prevent accidental ingestion of this product. Properly dispose of contaminated leather articles including shoes that cannot be decontaminated.
<b>Storage</b>	Store in dry, cool, well-ventilated area. Keep container tightly closed. Store away from incompatible and reactive materials (See section 5 and 10).

**Section VIII. Exposure Controls/Personal Protection**

<b>Engineering Controls</b>	For normal application, special ventilation is not necessary. If user's operations generate vapours or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. Make-up air should always be supplied to balance air removed by exhaust ventilation. Ensure that eyewash station and safety shower are close to work-station.
<b>Personal Protection</b>	<b>- The selection of personal protective equipment varies, depending upon conditions of use.</b>
<b>Eyes</b>	As a minimum, safety glasses with side shields should be worn when handling this material.
<b>Body</b>	If this material may come in contact with the body during handling and use, we recommend wearing appropriate protective clothing to prevent contact with the skin. (Contact your PPE provider for more information.)
<b>Respiratory</b>	A NIOSH-approved air-purifying respirator with an organic vapour cartridge or canister with a dust, fume of mist filter (R, or P series) may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited. A NIOSH-approved positive-pressure, air-supplied respirator or self-contained breathing apparatus may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.
<b>Hands</b>	If this material may come in contact with the hands during handling and use, we recommend wearing gloves of the following material(s): neoprene, nitrile, polyvinyl alcohol (PVA), fluoro-elastomer. Consult your PPE provider for breakthrough times and the specific glove that is best for you based on your use patterns. It should be realized that eventually any material regardless of their imperviousness, will get permeated by chemicals. Therefore, protective gloves should be regularly checked for wear and tear. At the first signs of hardening and cracks, they should be changed.
<b>Feet</b>	Wear appropriate footwear to prevent product from coming in contact with feet and skin.

**Section IX. Physical and Chemical Properties**

<b>Physical State and Appearance</b>	Viscous liquid.	<b>Viscosity</b>	PHT9: 8.0 - 11.0 cSt @ 40°C, 2.6 cSt @ 100°C. VI = ≥90 PHT10: 9.0 - 11.5 cSt @ 40°C, 2.6 cSt @ 100°C. VI = 78 PHT15: 14.6 - 16.3 cSt @ 40°C, 3.48 cSt @ 100°C. VI = ≥92 PHT22: 19.8 - 24.2 cSt @ 40°C, 4.25 cSt @ 100°C. VI = ≥90 PHT32: 31.5 - 38.5 cSt @ 40°C, 5.45 cSt @ 100°C. VI = ≥93 PHT46: 41.4 - 50.6 cSt @ 40°C, 6.97 cSt @ 100°C. VI = ≥95 PHT68: 61.2 - 74.8 cSt @ 40°C, 9.1 cSt @ 100°C. VI = ≥95 PHT100: 90 - 110 cSt @ 40°C, 12.04 cSt @ 100°C. VI = ≥92
<b>Colour</b>	Clear and bright	<b>Pour Point</b>	PHT9: ≤ -30°C (-22°F) PHT10: ≤ -18°C (0°F) PHT15: ≤ -18°C (0°F) PHT22: ≤ -12°C (10°F) PHT32: ≤ -12°C (10°F) PHT46: ≤ -12°C (10°F) PHT68: ≤ -9°C (16°F) PHT100: ≤ -9°C (16°F)
<b>Odour</b>	Mild petroleum oil like.	<b>Softening Point</b>	Not applicable
<b>Odour Threshold</b>	Not available	<b>Dropping Point</b>	Not applicable
<b>Boiling Point</b>	Not available	<b>Penetration</b>	Not applicable
<b>Density</b>	0.8150 to 0.8703 kg/L @ 15°C (59°F).	<b>Oil / Water Dist. Coeff.</b>	Not available
<b>Vapour Density</b>	Not available	<b>Ionicity (in water)</b>	Not available
<b>Vapour Pressure</b>	Negligible at ambient temperature and pressure.	<b>Dispersion Properties</b>	Not available
<b>Volatility</b>	Not available	<b>Solubility</b>	Insoluble in water.

**Section X. Stability and Reactivity**

<b>Corrosivity</b>	Not available		
<b>Stability</b>	The product is stable under normal handling and storage conditions.	<b>Hazardous Polymerization</b>	Will not occur under normal working conditions.
<b>Incompatible Substances / Conditions to Avoid</b>	Reactive with oxidizing agents and acids	<b>Decomposition Products</b>	May release CO <sub>x</sub> , NO <sub>x</sub> , SO <sub>x</sub> , PO <sub>x</sub> , ZnO <sub>x</sub> , smoke and irritating vapours when heated to decomposition.

**Section XI. Toxicological Information**

<b>Routes of Entry</b>	Skin contact, eye contact, inhalation and ingestion.		
<b>Acute Lethality</b>	Acute toxicity information is not available for the product as a whole, therefore, data for the base oils are provided below: Acute Oral toxicity (LD50): >5000 mg/kg (rat) Acute Dermal toxicity (LD50): >2000 mg/kg (rabbit) Acute Inhalation toxicity (LC50): >2500 mg/m <sup>3</sup> /4h (rat)		
<b>Chronic or Other Toxic Effects</b>	<p><b>Dermal Route:</b> Prolonged or repeated contact may defat and dry skin, and cause dermatitis. Short-term exposure is expected to cause only slight irritation, if any.</p> <p><b>Inhalation Route:</b> With its relatively low vapour pressure, this product is not expected to be inhaled in any appreciable quantity at ambient conditions. If heated to high temperatures or subjected to mechanical actions which produce vapours or mists, inhalation may cause respiratory tract irritation.</p> <p><b>Oral Route:</b> Ingestion of this product may lead to aspiration of the liquid, especially if vomiting occurs. This may result in chemical pneumonitis (inflammation of the lungs) and/or pulmonary edema (an accumulation of fluid in the lungs). May produce a laxative effect.</p> <p><b>Eye Irritation/Inflammation:</b> Short-term exposure is expected to cause only slight irritation, if any.</p> <p><b>Immunotoxicity:</b> Not available</p> <p><b>Skin Sensitization:</b> Contact with this product is not expected to cause skin sensitization, based upon the available data and the known hazards of the components.</p> <p><b>Respiratory Tract Sensitization:</b> Contact with this product is not expected to cause respiratory tract sensitization, based upon the available data and the known hazards of the components.</p> <p><b>Mutagenic:</b> This product is not known to contain any components at <math>\geq 0.1\%</math> that have been shown to cause mutagenicity. Therefore, based upon the available data and the known hazards of the components, this product is not expected to be a mutagen.</p> <p><b>Reproductive Toxicity:</b> This product is not known to contain any components at <math>\geq 0.1\%</math> that have been shown to cause reproductive toxicity. Therefore, based upon the available data and the known hazards of the components, this product is not expected to be a reproductive toxin.</p> <p><b>Teratogenicity/Embryotoxicity:</b> This product is not known to contain any components at <math>\geq 0.1\%</math> that have been shown to cause teratogenicity and/or embryotoxicity. Therefore, based upon the available data and the known hazards of the components, this product is not expected to be a teratogen/embryotoxin.</p> <p><b>Carcinogenicity (ACGIH):</b> This product is not known to contain any chemicals at reportable quantities that are listed as Group A1 or A2 carcinogens by ACGIH.</p> <p><b>Carcinogenicity (IARC):</b> This product is not known to contain any chemicals at reportable quantities that are listed as Group 1, 2A, or 2B carcinogens by IARC.</p> <p><b>Carcinogenicity (NTP):</b> This product is not known to contain any chemicals at reportable quantities that are listed as carcinogens by NTP.</p> <p><b>Carcinogenicity (IRIS):</b> This product is not known to contain any chemicals at reportable quantities that are listed as carcinogens by IRIS.</p> <p><b>Carcinogenicity (OSHA):</b> This product is not known to contain any chemicals at reportable quantities that are listed as carcinogens by OSHA.</p>		
<b>Other Considerations</b>	No additional remark.		

**Section XII. Ecological Information**

<b>Environmental Fate</b>	Not available	<b>Persistence/Bioaccumulation Potential</b>	Not available
<b>BOD5 and COD</b>	Not available	<b>Products of Biodegradation</b>	Not available
<b>Additional Remarks</b>	No additional remark.		

**Section XIII. Disposal Considerations**

**Waste Disposal** Spent/ used/ waste product may meet the requirements of a hazardous waste. Consult your local or regional authorities. Ensure that waste management processes are in compliance with government requirements and local disposal regulations.

**Section XIV. Transport Information**

<b>DOT Classification</b>	Not a hazardous material for transport according to the requirements of the DOT. (United States)	<b>Special Provisions for Transport</b>	Not applicable.
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**Section XV. Regulatory Information**

**Other Regulations** This product is acceptable for use under the provisions of WHMIS-CPR. All components of this formulation are listed on the CEPA-DSL (Domestic Substances List).

All components of this formulation are listed on the US EPA-TSCA Inventory.

All components of this product are on the European Inventory of Existing Commercial Chemical Substances (EINECS).

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

Please contact Product Safety for more information.

<b>DSD/DPD (EEC)</b>	Not classified under the Dangerous Substances or Dangerous Preparations Directives.	<b>WHMIS (Canada)</b>	Not controlled
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<b>ADR (Europe) (Pictograms)</b>	NOT EVALUATED FOR EUROPEAN TRANSPORT NON ÉVALUÉ POUR LE TRANSPORT EUROPÉEN.	<b>TDG (Canada) (Pictograms)</b>	
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**Section XVI. Other Information**

**References** Available upon request.  
\* Marque de commerce de Petro-Canada - Trademark

**Glossary**

ACGIH - American Conference of Governmental Industrial Hygienists	IRIS - Integrated Risk Information System
ADR - Agreement on Dangerous goods by Road (Europe)	LD50/LC50 - Lethal Dose/Concentration kill 50%
ASTM - American Society for Testing and Materials	LDLo/LCLo - Lowest Published Lethal Dose/Concentration
BOD5 - Biological Oxygen Demand in 5 days	NAERG'96 - North American Emergency Response Guide Book (1996)
CAN/CGA B149.2 Propane Installation Code	NFPA - National Fire Prevention Association
CAS - Chemical Abstract Services	NIOSH - National Institute for Occupational Safety & Health
CEPA - Canadian Environmental Protection Act	NPRI - National Pollutant Release Inventory
CERCLA - Comprehensive Environmental Response, Compensation and Liability Act	NSNR - New Substances Notification Regulations (Canada)
CFR - Code of Federal Regulations	NTP - National Toxicology Program
CHIP - Chemicals Hazard Information and Packaging Approved Supply List	OSHA - Occupational Safety & Health Administration
CNS - Central Nervous System	PEL - Permissible Exposure Limit
COD5 - Chemical Oxygen Demand in 5 days	RCRA - Resource Conservation and Recovery Act
CPR - Controlled Products Regulations	RTECS - Registry of Toxic Effects of Chemical Substances
DOT - Department of Transport	SARA - Superfund Amendments and Reorganization Act
DSCL - Dangerous Substances Classification and Labeling (Europe)	SD - Single Dose
DSD/DPD - Dangerous Substances or Dangerous Preparations Directives (Europe)	STEL - Short Term Exposure Limit (15 minutes)
DSL - Domestic Substance List	TDG - Transportation Dangerous Goods (Canada)
EEC/EU - European Economic Community/European Union	TDLo/TCLo - Lowest Published Toxic Dose/Concentration
EINECS - European Inventory of Existing Commercial Chemical Substances	TLM - Median Tolerance Limit
EPA - Environmental Protection Agency	TLV-TWA - Threshold Limit Value-Time Weighted Average
EPCRA - Emergency Planning and Community Right to Know Act	TSCA - Toxic Substances Control Act
FDA - Food and Drug Administration	USEPA - United States Environmental Protection Agency
FIFRA - Federal Insecticide, Fungicide and Rodenticide Act	USP - United States Pharmacopoeia
HCS - Hazard Communication Standard	WHMIS - Workplace Hazardous Material Information System
HMIS - Hazardous Material Information System	
IARC - International Agency for Research on Cancer	

**For Copy of MSDS****Prepared by Product Safety - JDW on 11/2/2005.**

Internet: [www.petro-canada.ca/msds](http://www.petro-canada.ca/msds)

**Lubricants:**

Western Canada, telephone: 1-800-661-1199; fax: (780) 464-9564

Ontario & Central Canada, telephone: 1-800-268-5850 and (905) 822-4222; fax:  
1-800-201-6285

Quebec & Eastern Canada, telephone: 1-800-576-1686; fax: 800-201-6285

For Product Safety Information: (905) 804-4752

Data entry by Product Safety - DSR.

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