PETRO-CANADA

Material Safety Data Sheet

WHMIS (Pictograms)	WHMIS (Classification)	Protective Clothing	TDG (pictograms)
	**Not controlled**		

Section 1. Chemical Product and Company Identification

Product Name	**SNOWMOBILE MOTOR OIL**	**Code**	460-401-8, PSNOL
Synonym	Not available	**Validated on**	**7/27/2005.**
Manufacturer	PETRO-CANADA P.O. Box 2844 Calgary, Alberta T2P 3E3	**In case of Emergency**	Petro-Canada: 403-296-3000 Canutec Transportation: 613-996-6666 Poison Control Centre: Consult local telephone directory for emergency number(s).
Material Uses	Low ash engine oil specifically designed to lubricate two-cycle snowmobile engine.		

Section 2. Composition and Information on Ingredients

Name	CAS #	% (W/W)	*Exposure Limits (ACGIH)* TLV-TWA(8 h)	STEL	CEILING
Mixture of severely hydrotreated and hydrocracked and/or solvent-refined base oil (petroleum) and other proprietary, non-hazardous additives.	Mixture	100	5 mg/m³ (oil mist)	10 mg/m³ (oil mist)	Not established

Manufacturer Recommendation	Not applicable
Other Exposure Limits	Consult local, state, provincial or territory authorities for acceptable exposure limits.

Section 3. Hazards Identification.

Potential Health Effects	Prolonged or repeated contact may cause skin irritation, defatting, drying and dermatitis. Not expected to cause more than slight skin or eye irritation. With its relatively low vapour pressure, this product is not expected 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. Ingestion may produce a laxative effect. For more information refer to Section 11 of this MSDS.

Section 4. First Aid Measures

Eye Contact	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.
Skin Contact	Quickly and gently blot or brush away 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. If irritation persists, obtain medical advice. Completely decontaminate clothing, shoes and leather goods before reuse or discard.
Inhalation	Remove source of contamination or move victim to fresh air. If irritation persists, obtain medical advice.
Ingestion	NEVER give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. DO NOT INDUCE VOMITING. 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.
Note to Physician	Not available

Section 5. Fire-fighting Measures

Flammability	Combustible at high temperature.	**Flammable Limits**	Not available
Flash Points	OPEN CUP: ≥130°C (266°F), ASTM D92, Cleveland.	**Auto-Ignition Temperature**	Not available
Fire Hazards in Presence of Various Substances	Low fire hazard. This material must be heated before ignition will occur.	**Explosion Hazards in Presence of Various Substances**	Do not cut, weld, heat, drill or pressurize empty container. Containers may explode in heat of fire.

Products of Combustion	Carbon oxides (CO, CO2), nitrogen oxides (NOx), sulfur oxides (SOx), smoke and irritating vapours as products of incomplete combustion.
Fire Fighting Media and Instructions	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 CO2. 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 6. Accidental Release Measures

Material Release or Spill	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.

Section 7. Handling and Storage

Handling	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.
Storage	Store away from incompatible and reactive materials (See section 5 and 10). Keep container tightly closed. Store in dry, cool, well-ventilated area.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	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.
Personal Protection - ***The selection of personal protective equipment varies, depending upon conditions of use.***	
Eyes	As a minimum, safety glasses with side shields should be worn when handling this material.
Body	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.)
Respiratory	A minimum of 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.
Hands	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.
Feet	Wear appropriate footwear to prevent product from coming in contact with feet and skin.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Viscous liquid.	**Viscosity**	21.1 cSt @ 40°C (104°F), 4.5 cSt @ 100°C (212°F), VI=127.
Colour	Blue-green	**Pour Point**	<-54°C (-65.2°F)
Odour	Mild petroleum oil like.	**Softening Point**	Not applicable.
Odour Threshold	Not available	**Dropping Point**	Not applicable.
Boiling Point	Not available	**Penetration**	Not applicable.
Density	0.88 kg/L @ 15°C (59°F).	**Oil / Water Dist. Coefficient**	Not available
Vapour Density	Not available	**Ionicity (in water)**	Not available

Vapour Pressure	Negligible at ambient temperature and pressure.	**Dispersion Properties**	Not available
Volatility	Non-volatile.	**Solubility**	Insoluble in water.

Section 10. Stability and Reactivity

Corrosivity	Not available		
Stability	The product is stable under normal handling and storage conditions.	**Hazardous Polymerization**	Will not occur under normal working conditions.
Incompatible Substances / Conditions to Avoid	Reactive with oxidizing agents.	**Decomposition Products**	May release COx, NOx, aldehydes, methacrylate monomers, smoke and irritating vapours when heated to decomposition.

Section 11. Toxicological Information

Routes of Entry	Skin contact, eye contact, inhalation and ingestion.
Acute Lethality	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/m³/4h (rat)
Chronic or Other Toxic Effects	
Dermal Route:	Prolonged or repeated contact may defat and dry skin, and cause dermatitis. Short-term exposure is expected to cause only slight irritation, if any.
Inhalation Route:	With its relatively low vapour pressure, this product is not expected 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.
Oral Route:	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.
Eye Irritation/Inflammation:	Short-term exposure is expected to cause only slight irritation, if any.
Immunotoxicity:	Not available
Skin Sensitization:	Contact with this product is not expected to cause skin sensitization, based upon the available data and the known hazards of the components.
Respiratory Tract Sensitization:	Contact with this product is not expected to cause respiratory tract sensitization, based upon the available data and the known hazards of the components.
Mutagenic:	This product is not known to contain any components at >= 0.1% 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.
Reproductive Toxicity:	This product is not known to contain any components at >= 0.1% 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.
Teratogenicity/Embryotoxicity:	This product is not known to contain any components at >= 0.1% 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.
Carcinogenicity (ACGIH):	This product is not known to contain any chemicals at reportable quantities that are listed as Group A1 or A2 carcinogens by ACGIH.
Carcinogenicity (IARC):	This product is not known to contain any chemicals at reportable quantities that are listed as Group 1, 2A, or 2B carcinogens by IARC.
Carcinogenicity (NTP):	This product is not known to contain any chemicals at reportable quantities that are listed as carcinogens by NTP.
Carcinogenicity (IRIS):	This product is not known to contain any chemicals at reportable quantities that are listed as carcinogens by IRIS.
Carcinogenicity (OSHA):	This product is not known to contain any chemicals at reportable quantities that are listed as carcinogens by OSHA.
Other Considerations	No additional remark.

Section 12. Ecological Information

Environmental Fate	Not available	**Persistance/ Bioaccumulation Potential**	Not available
BOD5 and COD	Not available	**Products of Biodegradation**	Not available
Additional Remarks	No additional remark.		

Section 13. 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 14. Transport Information

TDG Classification	Not a hazardous material for transport according to the TDG Regulations. (Canada)	**Special Provisions for Transport**	Not applicable.

Section 15. 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.

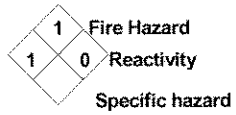
Please contact Product Safety for more information.

DSD/DPD (Europe)	Not classified under the Dangerous Substances or Dangerous Preparations Directives.	**HCS (U.S.A.)**	Does not meet the definitions of a health or physical hazard according to the OSHA - Hazard Communication Standard. (United States)
ADR (Europe) (Pictograms)		**DOT (U.S.A) (Pictograms)**	

HMIS (U.S.A.)

Health Hazard	1
Fire Hazard	1
Reactivity	0
Personal Protection	B

NFPA (U.S.A.)



Rating
0 Insignificant
1 Slight
2 Moderate
3 High
4 Extreme

Section 16. Other Information

References Available upon request.

* Marque de commerce de Petro-Canada - Trademark

Glossary

ACGIH - American Conference of Governmental Industrial Hygienists
ADR - Agreement on Dangerous goods by Road (Europe)
ASTM - American Society for Testing and Materials
BOD5 - Biological Oxygen Demand in 5 days
CAN/CGA B149.2 Propane Installation Code
CAS - Chemical Abstract Services
CEPA - Canadian Environmental Protection Act
CERCLA - Comprehensive Environmental Response, Compensation and Liability Act
CFR - Code of Federal Regulations
CHIP - Chemicals Hazard Information and Packaging Approved Supply List
CNS - Central Nervous System
COD5 - Chemical Oxygen Demand in 5 days
CPR - Controlled Products Regulations
DOT - Department of Transport
DSCL - Dangerous Substances Classification and Labeling (Europe)
DSD/DPD - Dangerous Substances or Dangerous Preparations
IRIS - Integrated Risk Information System
LD50/LC50 - Lethal Dose/Concentration kill 50%
LDLo/LCLo - Lowest Published Lethal Dose/Concentration
NAERG'96 - North American Emergency Response Guide Book (1996)
NFPA - National Fire Prevention Association
NIOSH - National Institute for Occupational Safety & Health
NPRI - National Pollutant Release Inventory
NSNR - New Substances Notification Regulations (Canada)
NTP - National Toxicology Program
OSHA - Occupational Safety & Health Administration
PEL - Permissible Exposure Limit
RCRA - Resource Conservation and Recovery Act
RTECS - Registry of Toxic Effects of Chemical Substances
SARA - Superfund Amendments and Reorganization Act
SD - Single Dose
STEL - Short Term Exposure Limit (15 minutes)
TDG - Transportation Dangerous Goods (Canada)
TDLo/TCLo - Lowest Published Toxic Dose/Concentration

Directives (Europe)
DSL - Domestic Substance List
EEC/EU - European Economic Community/European Union
EINECS - European Inventory of Existing Commercial Chemical Substances
EPA - Environmental Protection Agency
EPCRA - Emergency Planning and Community Right to Know Act
FDA - Food and Drug Administration
FIFRA - Federal Insecticide, Fungicide and Rodenticide Act
HCS - Hazard Communication Standard
HMIS - Hazardous Material Information System
IARC - International Agency for Research on Cancer
TLm - Median Tolerance Limit
TLV-TWA - Threshold Limit Value-Time Weighted Average
TSCA - Toxic Substances Control Act
USEPA - United States Environmental Protection Agency
USP - United States Pharmacopoeia
WHMIS - Workplace Hazardous Material Information System

For Copy of MSDS

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

Internet: 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

Prepared by Product Safety - JDW on 7/27/2005.

Data entry by Product Safety - RS.

PETRO-CANADA

Material Safety Data Sheet

WHMIS (Pictograms)	WHMIS (Classification)	Protective Clothing
	**Not controlled under WHMIS (Canada).**	

Section 1. Chemical Product and Company Identification

Product Name **RALUBE 40, 1024, 1724, 1740**

Code	490-785, 783, 786, 779 File # W200
DSL	On the DSL list.
Print Date:	**11/20/98.**

Supplier	PETRO-CANADA P.O. Box 2844 Calgary, Alberta T2P 3E3
Synonym	Not applicable
Chemical Name	Not applicable.
Chemical Family	Petroleum hydrocarbon
Chemical Formula	Not applicable.

In case of Emergency

Petro-Canada Emergency Number: (403) 296-3000
Canutec Transportation Emergency: (613) 996-6666
Poison Control Centre Numbers: Consult local telephone directory for emergency number(s).

Manufacturer	PETRO-CANADA P.O. Box 2844, Petro-Canada Centre Calgary, Alberta T2P 3E3
Material Uses	Ralube oils are designed to lubricate the medium speed diesel engines, which power railway locomotives.

Section 2. Composition/Information on Ingredients

		Exposure Limits (ACGIH)			
Name	**CAS #**	**TLV-TWA(8 h)**	**STEL**	**CEILING**	**% (V/V)**
Severely hydrotreated hydrocarbon oil (C26-C45) and additives	Mixture	5 mg/m3 (oil mist)	Not applicable	Not applicable	100

Section 3. Hazards Identification.

Potential Acute Health Effects Low toxicity on ingestion; has laxative effect and rapidly eliminated. Mildly irritating to eyes. Negligible breathing hazard at normal temperatures (up to 38 deg C) or recommended blending temperatures. Elevated temperatures or mechanical action may form vapours, mists, or fumes. Inhalation of oil mists or vapours from hot oil may cause irritation of the upper respiratory tract.

Potential Chronic Health Effects Prolonged or repeated contact with skin may cause mild irritation and possibly dermatitis.

Section 4. First Aid Measures

Eye Contact NO known EFFECT on eye contact, rinse with water for a few minutes. Physician assessment if irritation persists.

Skin Contact Remove contaminated clothing - launder before reuse. Soap and water wash. Discard saturated leather articles.

Inhalation Evacuate the victim to a safe area as soon as possible. If the victim is not breathing, perform mouth-to-mouth resuscitation. Administer oxygen if available. Allow the victim to rest in a well ventilated area. Seek medical attention.

Hazardous Inhalation No additional information.

Ingestion DO NOT induce vomiting. Force fluids. Activated charcoal tablets.

Hazardous Ingestion No additional information.

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Section 5. Fire-fighting Measures

The Product is:	Low fire hazard.
Auto-Ignition Temperature	355°C (671°F)
Flash Points	OPEN CUP: 215°C (419°F) (Cleveland.)
Flammable Limits	Not available.
Products of Combustion	Smoke on combustion.
Fire Hazards in Presence of Various Substances	Addition of water or foam may cause frothing. Avoid contact with strong oxidizing agents, including peroxides, chlorine and strong acids.
Explosion Hazards in Presence of Various Substances	Do not cut, drill or weld empty containers.
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemicals, CO_2, water spray or foam. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.
Special Remarks on Fire Hazards	No additional remark.
Special Remarks on Explosion Hazards	No additional remark.

Section 6. Accidental Release Measures

Small Spill	Avoid contact. Absorb with an inert material and place in an appropriate waste disposal container. Contain spill. DO NOT FLUSH TO SEWER. Check with applicable jurisdictions for specific disposal requirements of material and empty containers.
Large Spill	No additional remark.

Section 7. Handling and Storage

Handling	Avoid inhalation and skin contact especially when handling used oil. Wash hands after handling and before eating.. Launder work clothes frequently. Discard saturated leather goods. An API study has indicated that prolonged or repeated skin exposure to used motor oils can cause cancer in mice.
Storage	Combustible materials should be stored away from extreme heat and away from strong oxidizing agents. Store in cool, well-ventilated area.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	General ventilation.
Personal Protection	Safety glasses. For direct contact of more than 2 hours -- VITON or NITRILE gloves are needed, otherwise, PVC gloves may be used. Wear long sleeved clothing to minimize skin contact. Respirator normally not necessary. If mist generated by heating, spraying, etc. wear an organic vapour respirator with a mist filter. All respirators must be NIOSH certified.
Personal Protection in Case of a Large Spill	No additional remarks
Exposure Limits	TWA 5(mg/m3): manufacturers recommendation based on ACGIH TLV for oil mists.

Continued on Next Page

Section 9. Physical and Chemical Properties

Physical State and Appearance	Liquid. (Viscous liquid.)
Dropping Point	Not available.
Penetration (@ 25°C)	Not available.

Odor	Hydrocarbon. (Slight.)
Taste	Not available.
Color	Amber. (Dark.)

Boiling Point	316°C (600.8°F)
Melting Point	Not available.
Specific Gravity	0.88 (Water = 1)
Vapor Pressure	0.0075 mm of Hg (@ 20°C)
Vapor Density	Not available.
Volatility	Not available.
Odor Threshold	Not available.
Oil / Water Dist. Coeff.	Not available.
Viscosity (@ 40 °C)	> 120 cSt
Solubility	Soluble in methanol. Insoluble in cold water.

Section 10. Stability and Reactivity

Stability	The product is stable.		
Instability Temperature	82°C (179.6°F) based on data for: Agent 434.		
Conditions to Avoid	Avoid excessive heat. Formation of oil mist.		
Incompatibility with Various Substances	Highly reactive with oxidizing agents.	**Decomposition products:**	COx, SOx, NOx, oxides of calcium, chlorocarbons, smoke on combustion.
Corrosivity	Not applicable		
Special Remarks on Reactivity	Peroxides, chlorine, strong acids, etc.		
Special Remarks on Corrosivity	No additional remark.		

Section 11. Toxicological Information

Routes of Entry	Inhalation. Skin contact.
Toxicity to Animals	Acute oral toxicity (LD50): 5000 mg/kg (rat).
Chronic Effects on Humans	Prolonged or repeated contact with skin may cause mild irritation and possibly dermatitis.
Other Toxic Effects on Humans	Low toxicity on ingestion; has laxative effect and rapidly eliminated. Mildly irritating to eyes. Negligible breathing hazard at normal temperatures (up to 38 deg C) or recommended blending temperatures. Elevated temperatures or mechanical action may form vapours, mists, or fumes. Inhalation of oil mists or vapours from hot oil may cause irritation of the upper respiratory tract.
Special Remarks on Toxicity to Animals	Severely hydrotreated base oils are negative when tested by the modified Ames test.
Special Remarks on Chronic Effects on Humans	No additional remark.
Special Remarks on Other Toxic Effects on Humans	No additional remark.

Continued on Next Page

Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Not available.
Toxicity of the Products of Biodegradation	Not available.
Special Remarks on the Products of Biodegradation	No additional remark.

Section 13. Disposal Considerations

Waste Disposal	Consult your local or regional authorities. Preferred waste management priorities are: (1) recycle or reprocess; (2) incineration with energy recovery; (3) disposal at licensed waste disposal facility. Ensure that disposal or reprocessing is in compliance with government requirements and local disposal regulations.

Section 14. Transport Information

TDG Classification	Not controlled under TDG (Canada).
Special Provisions for Transport	No additional remark.

Section 15. Regulatory Information and Pictograms

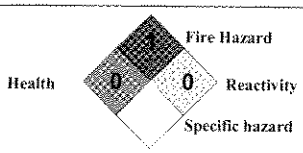
Other Regulations		CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA): This product is on the Domestic Substances List (DSL), and is acceptable for use under the provisions of CEPA.
Other Classifications	**WHMIS (Canada)**	Not controlled under WHMIS (Canada).
	DSD/DPD (EEC)	Not classified under the Dangerous Substances or Dangerous Preparations Directives.

WHMIS (Canada) (Pictograms)

HMIS (U.S.A.)

Health Hazard	0
Fire Hazard	1
Reactivity	0
Personal Protection	a

NFPA (U.S.A.)



DSD/DPD (Europe) (Pictograms)

TDG (Canada) (pictograms)

DOT (U.S.A) (Pictograms)

Continued on Next Page

Protective Clothing (Pictograms)

Section 16. Other Information

References	Available upon request.
Other Special Considerations	No additional remark.
Prepared by Admin-D on 1/19/98.	**Data entry by McBride.**
	Print Date: 11/20/98.
Information Contact	**Petro-Canada** **Product Safety Coordinator** **(403) 296-4410**

PETRO-CANADA

Material Safety Data Sheet

WHMIS (Pictograms)	WHMIS (Classification)	Protective Clothing	TDG (pictograms)
	B-3		

Section 1. Chemical Product and Company Identification

Product Name	**PETROSOL 3139**	**Code**	101, S3139, W109
Synonym	Stoddard Solvent; Paint Thinner; Regular Mineral Spirits.	**Validated on**	**7/13/2004.**
Manufacturer	PETRO-CANADA P.O. Box 2844 Calgary, Alberta T2P 3E3	**In case of Emergency**	Petro-Canada: 403-296-3000 Canutec Transportation: 613-996-6666 Poison Control Centre: Consult local telephone directory for emergency number(s).
Material Uses	Petrosol 3139 is widely used in a variety of applications: thinning paints and varnishes; dissolving resins and plastics; diluent to formulate coatings, adhesives and printing inks; cleaning and degreasing metal and automotive parts; drycleaning solvent; floor and general household cleaner.		

Section 2. Composition and Information on Ingredients

Name	CAS #	% (V/V)	Exposure Limits (ACGIH) TLV-TWA(8 h)	STEL	CEILING
Stoddard Solvent or Solvent Naphtha (Petroleum), Medium Aliphatic	8052-41-3 64742-88-7	100 100	100 ppm Not established	Not established Not established	Not established Not established

Manufacturer Recommendation

Stoddard Solvent contains the following chemicals that have exposure limits (ACGIH):
Trimethylbenzene TLV-TWA (8 h)=25 ppm
Napthalene TLV-TWA (8 h)=10 ppm
Ethyl Benzene TLV-TWA (8 h)=100 ppm

Solvent Naphtha (Petroleum), Medium Aliphatic contains:
1, 2, 4-Trimethylbenzene TLV-TWA (8 h)=25ppm

Manufacturer recommends adopting the Stoddard Solvent TLV-TWA (8 h) when handling Solvent Naphtha (Petroleum), Medium Aliphatic.

Other Exposure Limits: Consult local, state, provincial or territory authorities for acceptable exposure limits.

Section 3. Hazards Identification.

Potential Health Effects: Combustible liquid. Exercise caution when handling this material. Not expected to cause more than slight skin or eye irritation. Inhalation of this product may cause respiratory tract irritation and Central Nervous System (CNS) Depression, symptoms of which may include; weakness, dizziness, slurred speech, drowsiness, unconsciousness and in cases of severe overexposure; coma and death. Prolonged or repeated contact may cause skin irritation, defatting, drying and dermatitis. For more information refer to Section 11 of this MSDS.

Section 4. First Aid Measures

Eye Contact	IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek medical attention.
Skin Contact	Remove contaminated clothing - launder before reuse. Wash gently and thoroughly the contaminated skin with running water and non-abrasive soap. Seek medical attention.
Inhalation	Evacuate the victim to a safe area as soon as possible. If the victim is not breathing, perform artificial respiration. Allow the victim to rest in a well ventilated area. Seek medical attention.
Ingestion	DO NOT induce vomiting because of danger of aspirating liquid into lungs. Seek medical attention.
Note to Physician	Not available

Section 5. Fire-fighting Measures

Flammability	Class II - combustible liquid (NFPA).	**Flammable Limits** Lower: 1.0%; Upper: 13.3%	
Flash Points	CLOSED CUP:≥43°C (109.4°F). (Tag.)	**Auto-Ignition Temperature**	≥229°C (444°F)
Fire Hazards in Presence of Various Substances	Flammable, avoid open flames, sparks, static discharge and intense heat. Vapours are heavier than air and may travel considerable distance to sources of ignition and flash back. May accumulate in confined spaces.	**Explosion Hazards in Presence of Various Substances**	Do not cut, weld, heat, drill or pressurize empty container. Containers may explode in heat of fire.
Products of Combustion	Carbon oxides (CO, CO2), smoke and irritating vapours as products of incomplete combustion.		
Fire Fighting Media and Instructions	NAERG2000, GUIDE 128, Flammable liquids (Non-polar/Water-immiscible). CAUTION: This product has a very low flash point: Use of water spray when fighting fire may be inefficient. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. SMALL FIRES: Dry chemical, CO2, water spray or regular foam. LARGE FIRES: Water spray, fog or regular foam. Do not use straight streams. Move containers from fire area if you can do it without risk. Fires Involving Tanks or Car/Trailer Loads: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting devices or any discolouration of tank. ALWAYS stay away from the ends of tanks. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible withdraw from area and let fire burn. Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.		

Section 6. Accidental Release Measures

Material Release or Spill	IN THE EVENT OF A LARGE SPILL CONSIDER THE FOLLOWING CONTROL MEASURES: Consult current National Emergency Response Guide Book (NAERG) for appropriate spill measures if necessary. Evacuate non-essential personnel. Extinguish all ignition sources. Stop leak if safe to do so. Ventilate area. Dike spilled material. Use appropriate inert absorbent material to absorb spilled product. Avoid breathing vapours or mists of material. Avoid contact with spilled material. Avoid contaminating sewers, streams, rivers and other water courses with spilled material. If spilled in a confined space, ensure appropriate confined space entry protocols are followed. Notify appropriate authorities immediately.

Section 7. Handling and Storage

Handling	COMBUSTIBLE MATERIAL. Handle with care. Avoid contact with any sources of ignition, flames, heat, and sparks. Ensure all equipment is grounded/bonded. Avoid confined spaces and areas with poor ventilation. Avoid skin contact. Avoid eye contact. Avoid inhalation of product vapours or mists. 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. Wear proper personal protective equipment (See Section 8). Vapours are heavier than air and may travel considerable distance to sources of ignition and flash back. Personnel who handle this material should practice good personal hygiene during and after handling to help prevent accidental ingestion of this product.
Storage	Store away from incompatible and reactive materials (See section 5 and 10). Store away from heat and sources of ignition. Ensure the storage containers are grounded/bonded. Keep container tightly closed. Store in dry, cool, well-ventilated area.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	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.
Personal Protection	***The selection of personal protective equipment varies, depending upon conditions of use.***
Eyes	As a minimum, safety glasses with side shields should be worn when handling this material.
Body	If this material may come into 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.)
Respiratory	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. A NIOSH-approved air-purifying respirator with a organic vapour cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited. Use a positive-pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators my not provide adequate protection.

Hands	If this material may come in contact with the hands during handling and use, we recommend wearing gloves of the following material(s): Polyvinyl alcohol (PVA), Fluoro-elastomer and Specialty Laminated. Consult your PPE provider for breakthrough times and the specific glove that is best for you based on your use patterns.
Feet	Wear appropriate footwear to prevent product from coming in contact with feet and skin.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Liquid.	**Viscosity**	1.14 cSt @ 25°C (77°F).
Colour	Clear, Colourless.	**Pour Point**	Freezing Point: -58°C (-72.4°F)
Odour	Kerosene-like. Mild petroleum oil like.	**Softening Point**	Not applicable.
Odour Threshold	1 ppm (approx.)	**Dropping Point**	Not applicable.
Boiling Point	157.8 to 201.1°C (316.0 to 394.0°F)	**Penetration**	Not applicable.
Density	0.79 kg/L @ 15.5°C (59.9°F).	**Oil / Water Dist. Coefficient**	The product is more soluble in oil.
Vapour Density	≥4.6 (Air = 1)	**Ionicity (in water)**	Insoluble in water.
Vapour Pressure	~0.30 kPa @ 20°C ~0.9 kPa @ 38°C (100.4°F).	**Dispersion Properties**	Easily dispersed in n-octanol.
Volatility	100% Volatile Evaporation rate ~0.1 (n-butyl acetate=1)	**Solubility**	In water ≤0.05g/L @ 25°C. Soluble in alcohol, ether, chloroform, and benzene.

Section 10. Stability and Reactivity

Corrosivity	Non corrosive.		
Stability	The product is stable under normal handling and storage conditions.	**Hazardous Polymerization**	Will not occur under normal working conditions.
Incompatible Substances / Conditions to Avoid	Reactive with oxidizing agents.	**Decomposition Products**	May release COx, smoke and irritating vapours when heated to decomposition.

Section 11. Toxicological Information

Routes of Entry	Skin contact, eye contact, inhalation, and ingestion.
Acute Lethality	Acute Oral toxicity (LD50): >5000 mg/kg (rat) Acute Dermal toxicity (LD50): >3000 mg/kg (rabbit) Acute Inhalation toxicity (LC50): >5500 mg/m³/4h (rat) (Stoddard Solvent) Acute Inhalation toxicity (LC50): >14.1 mg/L/4h (rat) (Solvent Naphtha (Petroleum), Medium Aliphatic)
Chronic or Other Toxic Effects	
Dermal Route:	Prolonged or repeated contact may defat and dry skin, and cause dermatitis.
Inhalation Route:	Ingestion of this product may cause Central Nervous System (CNS) Depression, symptoms of which may include; weakness, dizziness, slurred speech, drowsiness, unconsciousness and in cases of severe overexposure; coma and death.
Oral Route:	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).
Eye Irritation/Inflammation:	Short-term exposure is expected to cause only slight irritation, if any.
Immunotoxicity:	Not available
Skin Sensitization:	Contact with this product is not expected to cause skin sensitization, based upon the available data and the known hazards of the components.
Respiratory Tract Sensitization:	Contact with this product is not expected to cause respiratory tract sensitization, based upon the available data and the known hazards of the components.
Mutagenic:	This product is not known to contain any components at >= 0.1% 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.
Reproductive Toxicity:	Causes foetotoxicity in animals at doses which are maternally toxic. Not expected to impair fertility.
Teratogenicity/Embryotoxicity:	This product is not known to contain any components at >= 0.1% 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.

Carcinogenicity (ACGIH):	This product is not known to contain any chemicals at reportable quantities that are listed as A1, A2 or A3 carcinogens by ACGIH.
Carcinogenicity (IARC):	IARC Group 3: cannot be classified as to carcinogenicity to humans (Petroleum solvents).
Carcinogenicity (NTP):	This product is not known to contain any chemicals at reportable quantities that are listed as carcinogens by NTP.
Carcinogenicity (IRIS):	This product is not known to contain any chemicals at reportable quantities that are listed as carcinogens by IRIS.
Carcinogenicity (OSHA):	This product is not known to contain any chemicals at reportable quantities that are listed as carcinogens by OSHA.
Other Considerations	May cause kidney and liver effects after prolonged skin contact.

Section 12. Ecological Information

Environmental Fate	Not available	**Persistance/ Bioaccumulation Potential**	Not available
BOD5 and COD	Not available	**Products of Biodegradation**	Not available
Additional Remarks	No additional remark.		

Section 13. 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 14. Transport Information

TDG Classification	PETROLEUM DISTILLATES, N.O.S., 3, UN1268, PGIII (CL-TDG)	**Special Provisions for Transport**	Not applicable.

Section 15. Regulatory Information

Other Regulations

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.

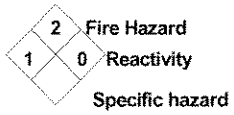
Please contact Product Safety for more information.

DSD/DPD (Europe)	Not evaluated.	**HCS (U.S.A.)**	CLASS: Combustible liquid having a flash point between 37.8°C (100°F) and 93.3°C (200°F).
ADR (Europe) (Pictograms)	NOT EVALUATED FOR EUROPEAN TRANSPORT NON ÉVALUÉ POUR LE TRANSPORT EUROPÉEN	**DOT (U.S.A) (Pictograms)**	

HMIS (U.S.A.)

Health Hazard	1
Fire Hazard	2
Reactivity	0
Personal Protection	H

NFPA (U.S.A.)



Rating
0 Insignificant
1 Slight
2 Moderate
3 High
4 Extreme

Section 16. Other Information

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

Glossary

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

For Copy of MSDS
Internet: www.petro-canada.ca/msds

Canada-wide: telephone: 1-800-668-0220; fax: 1-800-837-1228

For Product Safety Information: (905) 804-4752

Prepared by Product Safety - TLM on 7/13/2004.

Data entry by Product Safety - RS.

Material Safety Data Sheet

PETRO-CANADA

WHMIS (Pictograms)	WHMIS (Classification)	Protective Clothing	TDG (pictograms)
	**Not controlled**		

Section 1. Chemical Product and Company Identification

Product Name	**PETRO-CANADA SUPREME 5W-30, 10W-30, 10W-40, 20W-50 MOTOR OIL**	**Code**	410-344, MOSP53 410-341, MOSP13 410-342, MOSP14 410-343, MOSP25
		Validated on	**8/31/2004.**
Synonym	Not available.		
Manufacturer	PETRO-CANADA P.O. Box 2844 Calgary, Alberta T2P 3E3	**In case of Emergency**	Petro-Canada: 403-296-3000 Canutec Transportation: 613-996-6666 Poison Control Centre: Consult local telephone directory for emergency number(s).
Material Uses	Supreme is designed for the lubrication of all gasoline, propane and CNG engines where the manufacturer recommends the use of API SM quality oils. SAE 5W-30 and 10W-30 grades also meet the requirements of ILSAC GF-4.		

Section 2. Composition and Information on Ingredients

			Exposure Limits (ACGIH)		
Name	**CAS #**	**% (W/W)**	**TLV-TWA(8 h)**	**STEL**	**CEILING**
Mixture of severely hydrotreated and hydrocracked base oil (petroleum) and other proprietary, non-hazardous additives.	Mixture	100	5 mg/m³ (oil mist)	10 mg/m³ (oil mist)	Not established

Manufacturer Recommendation	Not applicable
Other Exposure Limits	Consult local, state, provincial or territory authorities for acceptable exposure limits.

Section 3. Hazards Identification.

Potential Health Effects	Prolonged or repeated contact may cause skin irritation, defatting, drying and dermatitis. Not expected to cause more than slight skin or eye irritation. With its relatively low vapour pressure, this product is not expected 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. Ingestion may produce a laxative effect. For more information refer to Section 11 of this MSDS.

Section 4. First Aid Measures

Eye Contact	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.
Skin Contact	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.
Inhalation	Remove source of contamination or move victim to fresh air. If irritation persists, obtain medical advice.
Ingestion	NEVER give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. DO NOT INDUCE VOMITING. 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.
Note to Physician	Not available