



Material Safety Data Sheet

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

Section 1. Chemical Product and Company Identification

Product Name	CHAIN OIL (SUMMER, WINTER)	Code	CHAS, 490-431 CHAW, 490-430
Synonym	Not available	Validated on	5/6/2003.
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	These products are designed for lubrication of chain saw chains in both high and low ambient temperatures.		

Section 2. Composition and Information on Ingredients

			Exposure Limits (ACGIH)		
Name	CAS #	% (V/V)	TLV-TWA(8 h)	STEL	CEILING
1) Mixture of severely hydrotreated and hydrocracked and/or solvent-refined base oil (petroleum) and other proprietary, non-hazardous additives.	Mixture	100	5 mg/m ³ (oil mist)	10 mg/m ³ (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	Non irritating to slight transient irritation to skin and eyes, but no permanent damage. Relatively non-toxic via ingestion. This product has a low vapour pressure and is not expected to present an inhalation exposure at ambient conditions. Upon heating to high temperatures, or mechanical actions which may produce vapours or mists, inhalation of product may cause irritation of the breathing passages. For more information, refer to Section 11.
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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	May be combustible at high temperature.	Flammable Limits	Not available
Flash Points	OPEN CUP: $\geq 168^{\circ}\text{C}$ (334.4°F) (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, CO ₂), nitrogen oxides (NO _x), sulphur oxides (SO _x), sulphur compounds (H ₂ S), phosphorus compounds (PO _x), smoke and irritating vapours as products of incomplete combustion.		

Fire Fighting Media and Instructions	NAERG96, 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 ₂ . 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.
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Section 6. Accidental Release Measures

Material Release or Spill	Consult current National Emergency Response Guide Book (NAERG) for appropriate spill measures if necessary. 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 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. 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 in dry, cool, well-ventilated area. Keep container tightly closed. Store away from incompatible and reactive materials (See section 5 and 10).

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 - <i>The selection of personal protective equipment varies, depending upon conditions of use.</i>	
Eyes	Eye protection (i.e., safety glasses, safety goggles and/or face shield) should be determined based on conditions of use. If product is used in an application where splashing may occur, the use of safety goggles and/or a face shield should be considered.
Body	Wear appropriate clothing to prevent skin contact. As a minimum long sleeves and trousers should be worn.
Respiratory	Where concentrations in air may exceed the occupational exposure limits given in Section 2 (and those applicable to your area) and where engineering, work practices or other means of exposure reduction are not adequate, NIOSH approved respirators may be necessary to prevent overexposure by inhalation.
Hands	Wear appropriate chemically protective gloves. When handling hot product ensure gloves are heat resistant and insulated.
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	Stringy liquid.	Viscosity	CHAS: 155 cSt @ 40°C (104°F), 16.2 cSt @ 100°C (212°F), VI=109 CHAW: 32 @ 40°C (104°F), 6.29 cSt @ 100°C (212°F), VI=151
Colour	Dark red.	Pour Point	CHAS: -21°C (-6°F) CHAW: -42°C (-44°F)
Odour	Slight petroleum oil like.	Softening Point	Not applicable.
Odour Threshold	Not available	Dropping Point	Not applicable.
Boiling Point	Not available	Penetration	Not applicable.
Density	0.831 - 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	Copper corrosion, 3h, 100°C (ASTM D0130): 1a		
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, reducing agents and acids.	Decomposition Products	May release COx, NOx, SOx, H2S, POx, smoke and irritating vapours when heated to decomposition.

Section 11. Toxicological Information

Routes of Entry	Skin contact, eye contact, inhalation and ingestion.		
Acute Lethality	Not available		
Chronic or Other Toxic Effects			
Dermal Route:	Prolonged or repeated contact may cause skin irritation characterized by dermatitis or oil acne.		
Inhalation Route:	Negligible breathing hazard at normal temperatures (up to 38°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.		
Oral Route:	Low toxicity; has laxative effect.		
Eye Irritation/Inflammation:	Repeated or prolonged contact may cause transient irritation, but no permanent damage.		
Immunotoxicity:	Not available		
Skin Sensitization:	This product is not expected to be a skin sensitizer, based on the available data and the known hazards of the components.		
Respiratory Tract Sensitization:	This product is not expected to be a respiratory tract sensitizer, based on the available data and the known hazards of the components.		
Mutagenic:	This product is not expected to be a mutagen, based on the available data and the known hazards of the components.		
Reproductive Toxicity:	This product is not expected to be a reproductive hazard, based on the available data and the known hazards of the components.		
Teratogenicity/Embryotoxicity:	This product is not expected to be a teratogen or an embryotoxin, based on the available data and the known hazards of the components.		
Carcinogenicity (ACGIH):	This product is not known to contain any chemicals at reportable quantities that are listed as 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):	Not available		
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	Persistence/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.		
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Section 14. Transport Information

TDG Classification	Not controlled under TDG (Canada).	Special Provisions for Transport	Not applicable.
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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 formulation are listed on EINECS or are exempt. 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.) Not controlled under the HCS (United States).									
ADR (Europe) (Pictograms) 		DOT (U.S.A) (Pictograms) 									
HMIS (U.S.A.) <table><tr><td>Health Hazard</td><td>1</td></tr><tr><td>Fire Hazard</td><td>1</td></tr><tr><td>Reactivity</td><td>0</td></tr><tr><td>Personal Protection</td><td>B</td></tr></table>		Health Hazard	1	Fire Hazard	1	Reactivity	0	Personal Protection	B	NFPA (U.S.A.) Health 1 Fire Hazard 1 Reactivity 0 Specific hazard Rating 0 Insignificant 1 Slight 2 Moderate 3 High 4 Extreme	
Health Hazard	1										
Fire Hazard	1										
Reactivity	0										
Personal Protection	B										

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 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 EPCRA - Emergency Planning and Community Right to Know Act FDA - Food and Drug Administration FIFRA - Federal Insecticide, Fungicide and Rodenticide Act HCS - Hazardous Communication System 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 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 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 5/6/2003. Data entry by Product Safety - JDW.

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