






# Material Safety Data Sheet

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

## Section 1. Chemical Product and Company Identification

Product Name	DRILL ROD HEAVY GREASE	Code	650-265, DRODH
Synonym	Not available.	DSL	See Section 15
Manufacturer	PETRO-CANADA P.O. Box 2844 Calgary, Alberta T2P 3E3	TSCA	See Section 15
Material Uses	This product is recommended for the lubrication of diamond drill rods.	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).

## Section 2. Composition and Information on Ingredients

			Exposure Limits (ACGIH)		
Name	CAS #	% (W/W)	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 <sup>3</sup> (oil mist)	10 mg/m <sup>3</sup> (oil mist)	Not established

## 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. High pressure grease gun is capable of injecting grease through the skin. Grease gun injuries require immediate physician assessment. 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	Mineral Oil Blend: OPEN CUP: 252°C (485.6°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	Containers may explode in heat of fire. Do not cut, weld, heat, drill or pressurize empty container.
Products of Combustion	Carbon oxides (CO, CO <sub>2</sub> ), 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 <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 6. Accidental Release Measures**

<b>Material Release or Spill</b>	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**

<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. 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 8. 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 - The selection of personal protective equipment varies, depending upon conditions of use.</b>	
<b>Eyes</b>	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.
<b>Body</b>	Wear appropriate clothing to prevent skin contact. As a minimum long sleeves and trousers should be worn.
<b>Respiratory</b>	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.
<b>Hands</b>	Wear appropriate chemically protective gloves. When handling hot product ensure gloves are heat resistant and insulated.
<b>Feet</b>	Wear appropriate footwear to prevent product from coming in contact with feet and skin.
<b>Exposure Limits</b>	Consult local, state, provincial or territory authorities for acceptable exposure limits. This product is not expected to form a mist based on its properties and expected use.

**Section 9. Physical and Chemical Properties**

<b>Physical State and Appearance</b>	Paste of long fibred texture.	<b>Viscosity</b>	Mineral Oil Blend: 155.5 cSt @ 40°C (104°F), 14.42 cSt @ 100°C (212°F), VI=89
<b>Colour</b>	Dark greenish-brown	<b>Pour Point</b>	Mineral Oil Blend: -15°C (5°F)
<b>Odour</b>	Mild grease like.	<b>Softening Point</b>	Not available
<b>Odour Threshold</b>	Not available.	<b>Dropping Point</b>	201°C (394°F)
<b>Boiling Point</b>	Not available.	<b>Penetration</b>	234 (60 strokes)
<b>Specific Gravity</b>	Mineral Oil Blend: 0.8898 kg/L @ 15°C (59°F).	<b>Oil / Water Dist. Coeff.</b>	Not available.
<b>Vapor Density</b>	Not available.	<b>Ionicity (in water)</b>	Not available
<b>Vapor Pressure</b>	Negligible at ambient temperature and pressure.	<b>Dispersion Properties</b>	Not available.
<b>Volatility</b>	Non-volatile.	<b>Solubility</b>	Insoluble in water.

**Section 10. Stability and Reactivity**

<b>Corrosivity</b>	Not corrosive to copper.		
<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, acids and alkalis.	<b>Decomposition Products</b>	May release COx, NOx, SOx, diphenylamine, alkenes, smoke and irritating vapours when heated to decomposition.

**Section 11. Toxicological Information**

<b>Routes of Entry</b>	Skin contact, eye contact, inhalation and ingestion.
<b>Acute Lethality</b>	Based on toxicity of components. Acute oral toxicity (LD50): >5000 mg/kg (rat). Acute dermal toxicity (LD50): >2000 mg/kg (rabbit).
<b>Chronic or Other Toxic Effects</b>	
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:	Based on actual test results of base oils and results of similar products, severely hydrotreated base oils give negative results when tested for: (a) Salmonella Typhimurium TA98 using the Modified Ames Assay for Petroleum Product; (b) Salmonella-Escherichia coli/Mammalian-Microsome Reverse Mutation Assay (Ames test) with a Confirmatory Assay; (c) Structural Chromosomal Aberrations in Chinese Hamster Ovary (CHO) Cells.
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.
<b>Other Considerations</b>	No additional remark.

**Section 12. 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 13. Disposal Considerations**

<b>Waste Disposal</b>	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**

<b>TDG Classification</b>	Not controlled under TDG (Canada).	<b>Special Provisions for Transport</b>	Not applicable.
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**Section 15. Regulatory Information**

<b>Other Regulations</b>	<p>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).</p> <p>All components of this formulation are listed on the US EPA-TSCA Inventory.</p> <p>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.</p> <p>Please contact Product Safety for more information.</p>								
<b>DSD/DPD (Europe)</b>	Not evaluated.								
<b>DSD/DPD (Europe) (Pictograms)</b>	<p>NOT EVALUATED FOR EUROPEAN TRANSPORT</p> <p>NON ÉVALUÉ POUR LE TRANSPORT EUROPÉEN.</p> <p>DOT (U.S.A) (Pictograms)</p>								
<b>HMIS (U.S.A.)</b>	<table border="1" data-bbox="402 552 688 676"> <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> <p>NFPA (U.S.A.)</p> <p>Health  Fire Hazard Reactivity Specific hazard</p>	Health Hazard	1	Fire Hazard	1	Reactivity	0	Personal Protection	B
Health Hazard	1								
Fire Hazard	1								
Reactivity	0								
Personal Protection	B								

**Section 16. Other Information**

<b>References</b>	<p>Available upon request.</p> <p>* Marque de commerce de Petro-Canada - Trademark</p>
<b>Glossary</b>	<p>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</p> <p>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 &amp; Health          NPRI - National Pollutant Release Inventory          NSNR - New Substances Notification Regulations (Canada)          NTP - National Toxicology Program          OSHA - Occupational Safety &amp; 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</p>
<b>Information Contact Internet: <a href="http://www.petro-canada.ca">www.petro-canada.ca</a></b>	<b>Prepared by Product Safety - JDW on 4/29/2003.</b>
<p><b>Lubricants:</b>  <b>Western Canada, telephone: 1-800-661-1199;</b>  <b>fax: (780) 464-9564</b>  <b>Ontario &amp; Central Canada, telephone:</b>  <b>1-800-268-5850 and (905) 822-4222; fax:</b>  <b>1-800-201-6285</b>  <b>Quebec &amp; Eastern Canada, telephone:</b>  <b>1-800-576-1686; fax: 800-201-6285</b></p>	<b>Data entry by Product Safety - JDW.</b>
<b>For Product Safety Information: (905) 804-4752</b>	

*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.*