



Atlas Copco Drilling Solutions
7500 Shadwell Drive
Roanoke, VA 24019
Phone : (540) 362-3321
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Material Safety Data Sheet

Date: JUNE 23, 2008

Trade Name: Atlas Copco, SuperTac Rock Drill Oil, Medium/Heavy/Extra Heavy

Synonyms:	Lubricating Oil	Technical Contact:	(540) 362-3321
CAS No.	(Mixture (Refer to Section 1))	Medical Emergency:	(800) 535-5053 (352) 323-3500
		INFOTRAC Emergency:	(800) 535-5053 (352) 323-3500
		Atlas Copco Contact:	(540) 561-4211

MATERIAL HAZARD EVALUATION

Health Precaution:	Protect exposed skin from repeated or prolonged exposure.
Safety Precautions:	Do not store material in open or unmarked containers.
HMIS Rating !:	Health: <u>0</u> Flammability: <u>1</u> Reactivity: <u>0</u>

Hazard Rating: Lease-0; Slight-1; Moderate-2; High-3; Extreme-4.

These values based upon an evaluation conducted pursuant to NPCA guidelines. **Use of an asterisk (*)** indicates that the material may present chronic health effects.

NA - Not Applicable

ND - No Data

NE - Not Established

1.0 GENERIC COMPOSITION / COMPONENTS

Components	CAS #	%	Hazard Data	
Refined Petroleum Oil(s)	Refer to Section 11	>90	Oral LD50(rat):	>5 g/kg
			Dermal and Eyes:	Mild Irritant
			Inhalation LC50 (rat):	>5,000 mg/M#
Refined Animal Fat	Mixture	0-10	Eyes and Dermal:	Irritant
Antiwear, EP, Oxidation and Corrosion Inhibitor Agents (may contain traces of zinc dialkyldithiophosphate)	Mixture	0-5	Oral LD50 (rat):	<5 g/kg.
			Dermal and Eyes:	Irritant
			Inhalation:	Respiratory Irritant
Emulsifier	Mixture	0-5	Dermal & Eye:	Irritant
Tackiness Agent	Mixture	0-5	Dermal & Eye:	Mild Irritant
Pour Point Depressant	Mixture	0-1	Dermal & Eye:	Mild Irritant
VI Improver	Mixture	0-1	Dermal & Eye:	Mild Irritant
Anti Foam Agent	Mixture	0-1.1	Oral:	High aspiration risk.
			Dermal & Eye:	Moderate Irritant
			Inhalation:	Respiratory Irritant

2.0 PHYSICAL DATA

PHYSICAL HAZARD CLASSIFICATION (Per 29 CFR 1910.1200)

Combustible	NO	Flammable	NO	Pyrophoric	NO
Compressed Gas	NO	Organic Peroxide	NO	Reactivity	NO
Explosive	NO	Oxidizer	NO	Stable	YES

Boiling Point, 760 mmHg, _C (_F): ~367 - 502 (~693 - 936)
 Specific Gravity (60//60_F) (H2O=1): ~0.88 - 0.92
 Vapor Density (Air = 1): >1
 % Volatiles by Volume: Negligible
 Melting Point, _C (_F): NA
 Vapor Pressure, mmHg (25_C): ~ 1x10⁻⁴ to ~ 6.3 x 10⁻⁵
 Solubility in Water: Negligible
 Evaporation Rate (n-butyl acetate = 1): <1
 pH of Undiluted Product: NA
 Appearance and Odor: Light to dark amber liquid, mild petroleum odor.

3.0 FIRE AND EXPLOSION DATA

Flash Point, OC, _C (_F): 168-307 (334-585)
 Flash Point, CC, _C (_F): ND
 Autoignition Temperature, _C (_F): ND
 NFPA Rating@: Health: 0 Flammability: 1 Reactivity: 0
 Flammable Limits (% by volume in air): LOWER: NA UPPER: NA
 Extinguishing Media: CO2, dry chemical, foam, water fog
 Special Fire Fighting Procedure: None
 Unusual Fire or Explosion Hazard: Water may cause frothing. This material may be ignited by sparks or flames.

Hazard Rating: Lease-0; Slight-1; Moderate-2; High-3; Extreme-4.

NA - Not Applicable

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4.0 REACTIVITY DATA

Stability:

Stable.

Conditions Contributing to Instability:	None
Incompatibility:	Strong oxidants, strong acids, caustics
Hazardous Decomposition Products:	CO2 (CO with incomplete combustion) and (thermal, unless otherwise specified). Traces of zinc, phosphorus and sulfur oxides.
Conditions Contributing to Hazardous Polymerization:	Hazardous polymerization is not expected to occur.

5.0 SPILL, LEAK AND DISPOSAL PROCEDURES

Procedure if Material is Spilled:

- Remove all ignition sources.
- *Small Spills:* Absorb released material with non-combustible absorbent. Place into containers for later disposal. (See Waste Disposal section below)
- *Large Spills:* Evacuate area in the event of significant spills. Evaluate exposure potential. Potential exposure may require the use of respiratory protection.

Use protective clothing. Contain spill in temporary dikes to avoid product migration and to assist in recover. Do not allow material to escape into sewers, ground water, drainage ditches or surface waters.

- Administer appropriate first aid.
- Report releases as required to the appropriate federal, state and local authorities.

Waste Disposal:

- It is the responsibility of the user to determine if the material is a hazardous waste at the time of disposal
- Determine compliance status with all applicable requirements prior to disposal.
- Contact the RCRA/Superfund Hotline at (800)424-9346 or your regional US EPA office for guidance concerning case specific disposal issues.

Protective Measures During Repair and Maintenance of Contaminated Equipment:

- Refer to Section 7.0 - Special Protection Information.
- Drain and purge equipment, as necessary, to remove material residues.
- Use impervious gloves constructed of neoprene or heavy nitrile rubber and protective work clothing if direct contact is anticipated.
- Eliminate heat and ignition sources.
- Wash exposed skin thoroughly with soap and water.
- Remove contaminated clothing. Launder before reuse.
- Keep unnecessary persons from hazard area.

These values based upon an evaluation conducted pursuant to NFPA guidelines.

NA - Not Applicable

ND - No Data

NE - Not Established

6.0 HEALTH HAZARD DATA

Health Hazard Classification (Per 29 CFR Part 1910.1200)

Carcinogen	NO	Corrosive	NO
Animal Carcinogen	NO	Irritant	NO
Suspect Carcinogen	NO	Sensitizer	NO
Mutagen	NO	Teratogen	NO
Highly Toxic	NO	Target Organ	NO
Toxic	NO		

CARCINOGEN OR POTENTIAL CARCINOGEN:

Product/Component	CAS No.	Conc.(%)	NTP	IARC	OSHA	Other
Atlas Copco Rock Drill Oils	Mixture	100	NO	NO	NO	NO

Toxicity Summary: Generally of a low order of toxicity.

Major Route of Entry: Inhalation of incidental mists or vapors, repeated or prolonged skin contact.

Acute Exposure Systems:

Inhalation: In enclosed spaces or when hot vapors may reach concentrations sufficient to cause drowsiness, dizziness, headache, nausea, or lung irritation. Elevated mist concentrations may cause lung damage.

Dermal Contact: Skin contact may cause transient, mild irritation in some individuals.

Eye Contact: Eye contact may cause transient, mild irritation in some individuals.

Ingestion: Upon ingestion of large quantities of material, slight gastrointestinal discomfort, diarrhea and headache may occur.

Injection: Subcutaneous or intramuscular injection may cause irritation, erythema, edema.

Chronic Exposure Symptoms:

Prolonged and/or frequent contact may cause drying, cracking (dermatitis) or folliculitis.

Other Special Effects:

None expected.

Medical Conditions Aggravated by Exposure:

None.

First Aid and Emergency Procedures for Acute Effects:

Inhalation: Move victim to fresh air. Provide respiratory support if necessary. Seek medical attention immediately.

Dermal: Wash exposed skin with soap and water. Remove contaminated clothing and launder before use.

Eyes: Flush eyes with large volumes of water for at least 15 minutes. Seek medical attention immediately.

Ingestion: Induce vomiting only upon the advice of a physician. Never give anything by mouth to an unconscious person. Seek medical attention immediately.

Injection: Subcutaneous injection is a medical emergency. Seek medical attention immediately.

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6.0 HEALTH HAZARD DATA (continued)

Notes to Physician:

The Saybolt viscosity range for the products represented by this MSDS is greater than 400 SUS at 100_ F. Accordingly, upon ingestion, there is little risk of aspiration. For quantities above one ounce, removal of ingested material by gastric lavage or emesis may be considered.

Subcutaneous or intramuscular injection requires prompt surgical debridement.

7.0 SPECIAL PROTECTION INFORMATION:

Ventilation Requirements:

Use in well ventilated area. In confined space, mechanical ventilation may be required to keep levels of certain components below applicable workplace exposure levels as evaluated by designated and properly trained personnel.

Ventilation Requirements:

Chemical Component	ACGIH TLV TWO ppm (mg/M#)	ACGIH TLV STEL/ Ceiling (C) ppm (mg/M#)	ACGIH TLV Skin notation	OSHA PEL TWA ppm (mg/M#)	OSHA PEL STEL/ Ceiling (C) ppm (mg/M#)	OSHA PEL Skin notation ?
Oil Mist, Mineral	(5)	(10)	No	(5)	NE	No

Specific Personal Protective Equipment

- Respirator:** At elevated temperatures, vapor or mist concentrations may exceed applicable workplace exposure levels. Use a NIOSH or MSHA approved organic vapor/mist chemical cartridge respirator when elevated airborne concentrations are anticipated.
- Eyes:** Safety glasses or chemical splash goggles if splashing is anticipated.
- Dermal:** Oil impervious gloves if frequent or prolonged contact is expected.
- Other Clothing or Equipment:** Wear body-covering work clothes to avoid prolonged or repeated exposure. Launder contaminated work clothes before reuse.

8.0 TRANSPORTATION AND SPECIAL PRECAUTIONS:

Storage: Store below 150_ F. Do not apply high heat or flame to container. Keep separate from strong oxidizing agents.

Caution: Empty containers may contain combustible residues.

Consult appropriate Federal, State and Local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers and/or waste residues of this product.

DOT Information:

Proper Shipping Name	Petroleum Lubricating Oils
Hazard Class	Non-Hazardous
Hazard Identification No.	None assigned
Packaging Group	None Assigned
Placard	None
Compatibility Category	Group 33
CHRIS Code	OLB

NA - Not Applicable

ND - No Data

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9.0 ENVIRONMENTAL DATA

Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA):

Section 313 - Toxic Chemicals:

This product is not known to contain any components in concentrations above *de minimis* levels that are listed as toxic chemicals in 40 CFR Part 372 pursuant to the requirements of Section 313 of SARA.

Section 311/312 - Hazard Categories:

This product may meet one or more of the criteria for the hazard categories defined in 40 CFR Part 370 as established by Sections 311 and 312 of SARA as indicated below:

Immediate (acute) Health Hazard: NO Sudden Release of Pressure Hazard NO
Delayed (Chronic) Health Hazard: NO Reactive Hazard: NO
Fire Hazard: NO

Section 302 - Extremely Hazardous Substances:

This product is not known to contain any components that are listed as Extremely Hazardous Substances in concentrations greater than one percent in 40 CFR Part 355 pursuant to the requirements of Section 302(a) of SARA.

Clean Water Act (CWA):

Under the CWA, discharges of crude oil and petroleum products to surface water without proper federal and state permits must be reported immediately to the National Response Center at (800)424-8802.

Comprehensive Environmental Response, Compensation, & Liability Act (CERCLA) Section 102 Hazardous Substances:

As defined by CERCLA, the term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance.

California Proposition 65 (The Safe Drinking Water and Toxics Enforcement Act):

This material contains components that are listed as:

Carcinogenic: NO Reproductive Hazard: NO

Federal Regulations:

Reported in TSCA	Product	Components
Atlas Copco Rock Drill Oils		X

10.0 LABELING

NOTE:

The products represented by this MSDS have been determined not to present a physical or a health hazard as defined by the OSHA Hazard Communication Standard.

NA - Not Applicable

ND - No Data

NE - Not Established

11.0 REFINED PETROLEUM OILS

The products listed on page one of this MSDS contains one or more of the following base oils.

Chemical/Common Name

CASE NO.

Solvent Refined Heavy Paraffinic Distillate

64741-88-4

Solvent Refined Light Paraffinic Distillate	64741-89-5
Hydrotreated Light Naphthenic Distillate	64742-53-6
Hydrotreated Heavy Naphthenic Distillate	64742-52-5
Solvent Dewaxed Residual Oil	64742-62-7
Solvent Refined Residuum	64742-01-4

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ND - No Data

NE - Not Established