Material Safety Data

Section I – Chemical Product and Company Information

Product Name: Dilmar Emulsifiable Oil 1000  
Preparation Date: 4/2011
Product Code: deceo1000  
Revision Date:
Product Use: Anti wear, extreme oil used to meet the lubrication requirements of high speed, heavily loaded rock drills, hammers and other pneumatically operated equipment.
Manufacturer: Cam2
Telephone: (800) 922-5823
Emergency Telephone Number: 1-800-424-9300 (Chemtrec)

Section II - COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Wt. Percent</th>
<th>Component</th>
<th>Synonym</th>
<th>CAS #</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 98</td>
<td>Highly refined petroleum lubricating oil</td>
<td>Lubricating oil base stock</td>
<td>Various *</td>
</tr>
<tr>
<td>0.3 - 0.7</td>
<td>Mineral Oil</td>
<td>Not Available</td>
<td>Mixture</td>
</tr>
<tr>
<td>0 - 0.50</td>
<td>Long-chain alkyl amine</td>
<td>Not Available</td>
<td>Proprietary</td>
</tr>
<tr>
<td>0 - 0.50</td>
<td>Alkoxylated long-chain alkanol borate</td>
<td>Not Available</td>
<td>Proprietary</td>
</tr>
<tr>
<td>0 - 0.50</td>
<td>Alkyl Phosphonate</td>
<td>Not Available</td>
<td>Proprietary</td>
</tr>
<tr>
<td>0 - 0.50</td>
<td>Alkyl phosphate</td>
<td>Not Available</td>
<td>Proprietary</td>
</tr>
<tr>
<td>0 - 0.50</td>
<td>Long-chain alkenyl succinimide</td>
<td>Not Available</td>
<td>Proprietary</td>
</tr>
<tr>
<td>0 - 0.50</td>
<td>Long-chain alkenyl amine</td>
<td>Not Available</td>
<td>Proprietary</td>
</tr>
</tbody>
</table>

Component Related Regulatory Information

* Highly refined petroleum lubricating oil contains one or more CAS numbers listed as follows: 4741-88-4, 64742-52-5, 64742-54-7, 64742-55-8, 64742-58-1, 64742-57-0, 64742-01-4, 64742-62-7, 72623-83-7.

This product may be regulated, have exposure limits or other information identified as the following: Oil mist, mineral (8012-95-1).

Section III – Hazardous Ingredients/Identity Information

Appearance
Amber to dark amber liquid, petroleum odor.

Health Hazards: May be harmful if swallowed. May irritate eyes and skin.

Safety Hazards: Not classified as flammable but will burn.

Environmental Hazards: Not classified as dangerous for the environment.

Health Hazard: Not expected to be a health hazard when used under normal conditions.

Health Hazards Inhalation: Under normal conditions of use, this is not expected to be a primary route of exposure.
**Skin Contact:** May cause irritation. Not likely to be absorbed through the skin in harmful amounts.

**Eye Contact:** May cause irritation to eyes.

**Ingestion:** May be harmful if swallowed. May cause throat irritation, nausea, vomiting, and diarrhea. Breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

**Other Information:** Used oil may contain harmful impurities.

**Signs and Symptoms:** Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Ingestion may result in nausea, vomiting and/or diarrhoea.

**Aggravated Medical Condition:** Individuals with pre-existing respiratory tract (nose, throat, and lungs) eye and/or skin disorders may have increased susceptibility to the effects of exposure.

**Chronic:** Prolonged or repeated inhalation of oil mist may cause oil pneumonia, lung tissue inflammation, and/or fibrous tissue formation. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis).

**Environmental Hazards:** A component of this product is toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment.

**Additional Information:** Under normal conditions of use or in a foreseeable emergency, this product does not meet the definition of a hazardous chemical when evaluated according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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**Section IV – First Aid Measures**

**General Information:** Not expected to be a health hazard when used under normal conditions.

**Inhalation:** No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.

**Skin Contact:** Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.

**Eye Contact:** Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.

**Ingestion:** In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.

**Advice to Physician:** Treat symptomatically.

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**Section V – Fire Fighting Measures**

Clear fire area of all non-emergency personnel.

**Flash point Upper / lower:** Typical 165 °C (minimum) / 329 °F (COC)

**Auto ignition temperature:** Not available

**Specific Hazards:** Decomposition and combustion materials may be toxic. Burning may produce oxides of sulfur and nitrogen, aldehydes, ketones, carbon monoxide and unidentified organic compounds.
Conditions of flammability: Sparks or flame. Product may burn, but does not ignite readily.

Suitable Extinguishing Media: Carbon dioxide, regular foam, dry chemical, water spray or water fog. Water or foam may cause foaming.

Unsuitable Extinguishing Media: Do not use water in a jet.

Protective Equipment for Firefighters: A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

Fire Fighting Instructions: Keep storage containers cool with water spray.

Fire and explosion: Heated containers may rupture. “Empty” containers may retain residue and can be dangerous. Product is not sensitive to mechanical impact or static discharge.

Section VI – Accidental Release Measures

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on disposal. Observe all relevant local and international regulations.

Protective Measures: Avoid contact with skin and eyes. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.

Clean Up Methods: Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly.

Additional Advice: Local authorities should be advised if significant spillages cannot be contained.

Section VII- Handling And Storage

Handling: Keep away from sparks or flame. Where flammable mixtures may be present, equipment safe for such location should be used. Use clean tools. When transferring large volumes of product, metal containers, including trucks and tank cars, should be grounded and bonded. This product has a low vapor pressure and is not expected to present an inhalation hazard under normal temperatures and pressures. However, when aerosolizing, misting, or heating this product, do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing and shoes.

Shipping and storing: Keep container tightly closed when not in use and during transport. Store containers in a cool, dry place. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Keep containers away from flame, sparks, static electricity, or other sources of ignition. Empty product containers may retain residue and can be dangerous.

Section VIII – Exposure Controls/Personal Protection

EXPOSURE GUIDELINES
Component Exposure Limits
Highly Refined Petroleum Lubricating Oil

ACGIH: 5mg/m³ TWA (sampled by method that does not collect vapor) (related to Oil mist, mineral)
10 mg/m³ STEL (sampled by method that does not collect vapor) (related to Oil mist, mineral)
OSHA Final: 5 mg/m³ TWA (related to Oil mist, mineral)
OSHA Vacated: 5 mg/m³ TWA (related to Oil mist, mineral)
NIOSH: 5 mg/m³ TWA (related to Oil mist, mineral)
10 mg/m³ STEL (related to Oil mist, mineral)

Mineral Oil
ACGIH: 5 mg/m³ TWA (sampled by method that does not collect vapor) (related to Oil mist, mineral)
0 mg/m³ STEL (sampled by method that does not collect vapor) (related to Oil mist, mineral)
OSHA Final: 5 mg/m³ TWA (related to Oil mist, mineral)

Engineering Controls: Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits.

Personal Protective Equipment: Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Respiratory Protection: No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapours [boiling point>65°C(149 °F)].

Hand Protection: Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

Eye Protection: Wear safety glasses or full face shield if splashes are likely to occur.

Protective Clothing: Skin protection not ordinarily required beyond standard issue work clothes.

Monitoring Methods: Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.

Environmental Exposure Controls: Minimize release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.

Section IX – Physical And Chemical Properties

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYSICAL STATE,</td>
<td></td>
</tr>
<tr>
<td>APPEARANCE</td>
<td>Amber to dark amber liquid</td>
</tr>
<tr>
<td>ODOR</td>
<td>Petroleum odor</td>
</tr>
<tr>
<td>ODOR THRESHOLD</td>
<td>Not available</td>
</tr>
<tr>
<td>MOLECULAR WEIGHT</td>
<td>Not applicable</td>
</tr>
<tr>
<td>SPECIFIC GRAVITY</td>
<td>0.89 (Estimated) (water=1)</td>
</tr>
<tr>
<td></td>
<td>(approximately)</td>
</tr>
<tr>
<td>VAPOR DENSITY</td>
<td>&gt;1 (Air = 1)</td>
</tr>
<tr>
<td>VAPOR PRESSURE</td>
<td>less than 0.1 mm Hg at 68°F</td>
</tr>
<tr>
<td></td>
<td>(20°C)</td>
</tr>
<tr>
<td>RELATIVE DENSITY</td>
<td>0.89 g/cm³ at 60°F (15.5°C)</td>
</tr>
<tr>
<td>INITIAL BOILING POINT</td>
<td>Not available</td>
</tr>
<tr>
<td>BOILING RANGE</td>
<td>Not available</td>
</tr>
</tbody>
</table>

Dilmar Emulsifiable Oil 1000     Material Safety Data     1-800-922-5823     www.dilmar.com
FREEZING/MELTING POINT: Not available
pH: Not applicable
EVAPORATION RATE: Not available
SOLUBILITY IN WATER: Insoluble
FLASH POINT: 329 °F (165 °C) (minimum) Cleveland Open Cup
FLAMMABILITY: Not available
FLAMMABLE LIMITS IN AIR: LOWER: Not available UPPER: Not available
AUTOIGNITION TEMPERATURE: Not available

Section X – Stability And Reactivity

Stability: Stable.
Incompatibility: Avoid oxidizing agents
Reactivity: Polymerization is not known to occur under normal temperatures and pressures. Not reactive with water.
Conditions to Avoid: Avoid heat, sparks and open flame.
Materials to Avoid: Strong oxidizing agents.
Hazardous Decomposition Products: Hazardous decomposition products are not expected to form during normal storage.

Section XI – Toxicological Information

Routes of exposure: Skin, Eyes, Ingestion, and Inhalation.
Acute Effects: May be harmful if swallowed. May irritate eyes and skin. May cause throat irritation, nausea, vomiting and diarrhea. Aspiration hazard: breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.
Repeated dose effects: Prolonged or repeated inhalation of oil mist may cause oil pneumonia, lung tissue inflammation, and/or fibrous tissue formation. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis).
Sensitization: Based on best current information, there is no known human sensitization associated with this product.
Mutagenicity: Based on best current information, there is no known mutagenicity associated with this product.
Carcinogenicity: Based on best current information, there is no known carcinogenicity as regulated by OSHA; as categorized by ACGIH A1 or A2 substances; as categorized by IARC Group 1 Group 2A, or Group 2B agents as either known carcinogens or substances for which there is limited evidence of carcinogenicity in humans or sufficient evidence of carcinogenicity in experimental animals.
Reproductive Toxicity: Based on best current information, there is no known reproductive toxicity associated with this product.
Teratogenicity: Based on best current information, there is no known teratogenicity associated with this product.
Neurotoxicity: High vapor / aerosol concentrations (attainable only at elevated temperatures) may cause central nervous system effects such as dizziness, drowsiness or headaches.

TOXICITY DATA:
Component Analysis – LD50/LC50

Mineral Oil
Dermal LD50 Rabbit >5000 mg/kg
Oral LD50 Rat >5000 mg/kg

Alkyl phosphate
Dermal LD50 Rabbit >2000 mg/kg
Oral LD50 Rat >3000 mg/kg
Section XII – Ecological Information

Ecotoxicity: Material expected to be harmful to aquatic organisms. May cause long term adverse effects in the aquatic environment.
Persistence/Degradability: Not readily biodegradable.
Bioaccumulatative Potential: No information available for the product.
Mobility in environmental media: Base oil component(s) – Low solubility and floats; expected to migrate from water to the land.
Other adverse effects: Not available.
Octanol/Water Partition Coefficient: Not available.
Volatile Organic Compounds: Negligible
Aquatic Release: Advise authorities if product has entered or may enter watercourses or sewer drains or sewer drains.

Section XIII – Disposal Considerations

Material Disposal: Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses.
Container Disposal: Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand.
Local Legislation: Disposal should be in accordance with applicable regional, national, and local laws and regulations.
USEPA Waste: This product, if discarded, is not expected to be a characteristic or listed hazardous waste. If recycled in the USA, it must be managed in accordance with 40 CFR Part 279. Processing, use, or contamination by user may change the waste code(s) applicable to the disposal of this product.

Section XIV – Transport Information

LAND (DOT): Not regulated as a hazardous material for Land Transport.
(Shipping Name)
LAND (TDG): Not regulated as a dangerous good for Land Transport.
(Shipping Name)
EMERGENCY RESPONSE Not applicable

Section XV – Regulatory Information

SARA SECTIONS: 302, 304 Based on the ingredients listed in SECTION 3, this product does not contain any “extremely hazardous substances” listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B.
SARA SECTIONS This product poses the following health hazard(s) as defined in 40 CFR Part 311 AND 312 and is subject to the requirements of sections 311 and 312 of Title III of REPORTING Superfund Amendments and Reauthorization Act of 1986 (SARA):
Immediate (Acute) Health Hazard Yes
Delayed (Chronic) Health Hazard Yes
Physical Fire No
Physical Sudden Release of Pressure No
Physical Reactive No
SARA SECTION This product does not contain any chemicals subject to the supplier notification requirements of the SARA 313 Toxic Release Program.
CERCLA: Based on the ingredients listed in SECTION 3, this product does not contain any “hazardous substances” listed pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4.

CALIFORNIA: This product contains a component that list the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm: 2-Propenoic Acid, Ethyl Ester, Ethylene oxide, Propylene oxide and 1,4-Dioxane.

Section XVI – Other Information

NFPA Rating (Health, Fire, Reactivity): 0, 1, 0
MSDS Version Number: 1.0
MSDS Effective Date: 10/23/2008
MSDS Revisions: A vertical bar (|) in the left margin indicates an amendment from the previous version.
MSDS Regulation: The content and format of this MSDS is in accordance with the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
MSDS Distribution: The information in this document should be made available to all who may handle the product.

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