SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

Product Identifier
Product Form: Mixtures
Product Name: Drill Lube
Synonyms: Anionic Friction Reducer
Intended Use of the Product: Friction Reducer
For professional use only

Name, Address, and Telephone of the Responsible Party
Customer
Economy® Polymers & Chemicals
435 E. Anderson Road
77047 Houston, TX
T 713-723-8416
www.economypolymers.com

Emergency Telephone Number
Emergency number: CHEMTREC 1-800-424-9300 (US); 703-527-3887 (International, collect calls are accepted)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture
Classification (GHS-US)
Skin Irrit. 2 H315
Eye Irrit. 2A H319
STOT SE 3 H336
Asp. Tox. 1 H304
Aquatic Acute 2 H401
Aquatic Chronic 2 H411

Label Elements
GHS-US Labeling
Hazard Pictograms (GHS-US):

Signal Word (GHS-US): Danger
Hazard Statements (GHS-US):
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness
H401 - Toxic to aquatic life
H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements (GHS-US):
P261 - Avoid breathing vapors, mist, spray.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, protective clothing, eye protection, face protection, respiratory protection.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 - Call a POISON CENTER or doctor if you feel unwell
P321 - Specific treatment (see section 4).
P331 - If swallowed, do NOT induce vomiting.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362 - Take off contaminated clothing.
P391 - Collect spillage.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P501 - Dispose of contents/container to local, regional, national, territorial, provincial, and international regulations.

Other Hazards

Other Hazards Not Contributing to the Classification: This product contains acrylamide which may polymerize violently due to heating above 85°C (185°F) or under the influence of lights or oxidants. Upon thermal decomposition nitrogen oxides and acrid fumes may be released. Exposure may aggravate individuals with pre-existing skin, kidney, liver, and pulmonary disorders. Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

Unknown Acute Toxicity (GHS-US) Not available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substances

Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>% (w/w)</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum distillates, hydrotreated light</td>
<td>(CAS No) 64742-47-8</td>
<td>15 – 40</td>
<td>Flam. Liq. 3, H226</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STOT SE 3, H336</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Asp. Tox. 1, H304</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aquatic Acute 2, H401</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aquatic Chronic 2, H411</td>
</tr>
<tr>
<td>2-Propenoic acid, polymer with 2-</td>
<td>(CAS No) 25987-30-8</td>
<td>10 - 30</td>
<td>Comb. Dust</td>
</tr>
<tr>
<td>propenamide, sodium salt</td>
<td></td>
<td></td>
<td>Skin Irrit. 2, H315</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Irrit. 2A, H319</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: When symptoms occur: go into open air and ventilate suspected area. Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor/physician if you feel unwell.

Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

Ingestion: Rinse mouth. Do NOT induce vomiting. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

Most Important Symptoms and Effects Both Acute and Delayed

General: Eye irritation. Swallowing the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis. Vapors may cause drowsiness and dizziness.

Inhalation: May cause drowsiness or dizziness

Skin Contact: Causes skin irritation

Eye Contact: Causes serious eye irritation
Ingestion: May be fatal if swallowed and enters airways
Chronic Symptoms: Not available

**Indication of Any Immediate Medical Attention and Special Treatment Needed**
If exposed or concerned, get medical advice and attention.

**SECTION 5: FIREFIGHTING MEASURES**

**Extinguishing Media**

Suitable Extinguishing Media: Water spray, fog, carbon dioxide, foam, dry chemical

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

**Special Hazards Arising From the Substance or Mixture**

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive

Reactivity: This product contains acrylamide which may polymerize violently due to heating above 85°C (185°F) or under the influence of lights or oxidants. Upon thermal decomposition nitrogen oxides and acrid fumes may be released

**Advice for Firefighters**

Precautionary Measures Fire: Exercise caution when fighting any chemical fire

Firefighting Instructions: Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.


Other information: Do not allow run-off from fire fighting to enter drains or water courses

Reference to Other Sections
Refer to section 9 for flammability properties.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective Equipment and Emergency Procedures**

**General Measures:** Avoid breathing (vapors, mist, spray). Use only outdoors or in a well-ventilated area. Handle in accordance with good industrial hygiene and safety practice. Do not allow product to spread into the environment. Do not get in eyes, on skin, or on clothing

**For Non-Emergency Personnel**

Protective Equipment: Use appropriate personal protection equipment (PPE).


**For Emergency Personnel**

Protective Equipment: Equip cleanup crew with proper protection. Use appropriate personal protection equipment (PPE).

Emergency Procedures: Ventilate area.

**Environmental Precautions**

Prevent entry to sewers and public waters. Avoid release to the environment

**Methods and Material for Containment and Cleaning Up**

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams

Methods for Cleaning Up: Clear up spills immediately and dispose of waste safely. Collect spillage. Absorb and/or contain spill with inert material, then place in suitable container. Contact competent authorities after a spill.

Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

**SECTION 7: HANDLING AND STORAGE**

**Precautions for Safe Handling**

Additional Hazards When Processed: This product contains acrylamide which may polymerize violently due to heating above 85°C (185°F) or under the influence of lights or oxidants. Upon thermal decomposition nitrogen oxides and acrid fumes may be released. Do not pressurize, cut, or weld containers. When heated to decomposition, emits toxic fumes.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Wash hands and forearms thoroughly after handling. Do no eat, drink or smoke when using this product.
**Drill Lube**

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

---

**Conditions for Safe Storage, Including Any Incompatibilities**

**Technical Measures:** Comply with applicable regulations.

**Storage Conditions:** Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Store in a well-ventilated place. Keep container tightly closed. Keep/Store away from extremely high or low temperatures, direct sunlight, ignition sources, incompatible materials.

**Incompatible Materials:** Strong acids, Strong bases, Strong oxidizers, Direct sunlight, Air, Oxidizer

**Storage Area:** Store locked up

**Specific End Use(s):** Friction Reducer. For professional use only

---

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control Parameters**

<table>
<thead>
<tr>
<th>Petroleum distillates, hydrotreated light (64742-47-8)</th>
<th>British Columbia</th>
<th>OEL TWA (mg/m³)</th>
<th>200 mg/m³ (application restricted to conditions in which there are negligible aerosol exposures)</th>
</tr>
</thead>
</table>

**Exposure Controls**

**Appropriate Engineering Controls:** Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed

**Personal Protective Equipment:** Gloves. Protective goggles. Insufficient ventilation: wear respiratory protection. Protective clothing.

**Materials for Protective Clothing:** Chemically resistant materials and fabrics

**Hand Protection:** Wear chemically resistant protective gloves.

**Eye Protection:** Chemical goggles or safety glasses.

**Skin and Body Protection:** Wear suitable protective clothing.

**Respiratory Protection:** Use NIOSH-approved air-purifying or supplied-air respirator where airborne concentrations of vapor or mist are expected to exceed exposure limits.

**Other Information:** When using, do not eat, drink or smoke.

---

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**Information on Basic Physical and Chemical Properties**

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Milky, white, opaque, liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild, hydrocarbon</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>pH</td>
<td>6 - 9</td>
</tr>
<tr>
<td>Relative Evaporation Rate (butylacetate=1)</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting Point</td>
<td>-15 °C (5°F)</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>&gt; 100 °C (&gt;212°F)</td>
</tr>
<tr>
<td>Flash Point</td>
<td>&gt; 100 °C (&gt;212°F)</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available</td>
</tr>
<tr>
<td>Lower Flammable Limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Upper Flammable Limit</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not available</td>
</tr>
</tbody>
</table>
Drill Lube
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Relative Vapor Density at 20 °C : Not available
Relative Density : Not available
Specific Gravity : 1.03-1.06
Solubility : Soluble in water
Log Pow : Not available
Log Kow : Not available
Viscosity, Kinematic : Not available
Viscosity, Dynamic : Not available
Explosion Data – Sensitivity to Mechanical Impact : Not available
Explosion Data – Sensitivity to Static Discharge : Not available

SECTION 10: STABILITY AND REACTIVITY

Reactivity: This product contains acrylamide which may polymerize violently due to heating above 85°C (185°F) or under the influence of lights or oxidants. Upon thermal decomposition nitrogen oxides and acrid fumes may be released.

Chemical Stability: Stable at standard temperature and pressure.

Possibility of Hazardous Reactions: This product contains acrylamide which may polymerize violently due to heating above 85°C (185°F) or under the influence of lights or oxidants. Upon thermal decomposition nitrogen oxides and acrid fumes may be released.

Conditions to Avoid: Extremely high or low temperatures. Sources of ignition. Incompatible materials. Direct sunlight.


SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity : Not classified
LD50 and LC50 Data Not available

Skin Corrosion/Irritation: Causes skin irritation. pH: 6 - 9
Serious Eye Damage/Irritation: Causes serious eye irritation. pH: 6 - 9
Respiratory or Skin Sensitization: Not classified
Germ Cell Mutagenicity: Not classified
Teratogenicity: Not available
Carcinogenicity: Not classified
Specific Target Organ Toxicity (Repeated Exposure): Not classified
Reproductive Toxicity: Not classified

Specific Target Organ Toxicity (Single Exposure): May cause drowsiness or dizziness.
Aspiration Hazard: May be fatal if swallowed and enters airways.
Symptoms/Injuries After Inhalation: May cause drowsiness or dizziness.
Symptoms/Injuries After Skin Contact: Causes skin irritation.
Symptoms/Injuries After Eye Contact: Causes serious eye irritation.
Symptoms/Injuries After Ingestion: May be fatal if swallowed and enters airways.

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data

Petroleum distillates, hydrotreated light (64742-47-8)

<table>
<thead>
<tr>
<th>LD50 Oral Rat</th>
<th>&gt; 5000 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 Dermal Rabbit</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td>LC50 Inhalation Rat (mg/l)</td>
<td>&gt; 5.2 mg/l/4h</td>
</tr>
</tbody>
</table>

SECTION 12: ECOLOGICAL INFORMATION

Toxicity
Ecology - General: Toxic to aquatic life with long lasting effects.
Drill Lube
Safety Data Sheet

Petroleum distillates, hydrotreated light (64742-47-8)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 Fish 1</td>
<td>45 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>4720 mg/l (Exposure time: 96 h - Species: Denдронередес heteropoda)</td>
</tr>
<tr>
<td>LC 50 Fish 2</td>
<td>2.2 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])</td>
</tr>
</tbody>
</table>

**Persistence and Degradability**

Drill Lube
Persistence and Degradability
May cause long-term adverse effects in the environment.

**Bioaccumulative Potential**

Drill Lube
Bioaccumulative Potential
Not established.

Petroleum distillates, hydrotreated light (64742-47-8)

| BCF fish 1               | 61 - 159       |

**Mobility in Soil**
Not available

**Other Adverse Effects**

Other Information: Avoid release to the environment.

**SECTION 13: DISPOSAL CONSIDERATIONS**

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

Ecology – Waste Materials: This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

**SECTION 14: TRANSPORT INFORMATION**

In Accordance With ICAO/IATA/DOT/TDG
UN Number
Not regulated for transport
UN Proper Shipping Name
Not regulated for transport
Additional Information
Not regulated for transport
Transport by sea
Not regulated for transport
Air transport
Not regulated for transport

**SECTION 15: REGULATORY INFORMATION**

US Federal Regulations

Drill Lube
SARA Section 311/312 Hazard Classes
Immediate (acute) health hazard

2-Propenoic acid, polymer with 2-propenamide, sodium salt (25987-30-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Petroleum distillates, hydrotreated light (64742-47-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

US State Regulations

2-Propenoic acid, polymer with 2-propenamide, sodium salt (25987-30-8)
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term

Petroleum distillates, hydrotreated light (64742-47-8)
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - 24-Hour
U.S. - New Hampshire - Regulated Toxic Air Pollutants - Ambient Air Levels (AALs) - Annual
U.S. - Texas - Effects Screening Levels - Long Term
U.S. - Texas - Effects Screening Levels - Short Term

**Canadian Regulations**

Drill Lube
Drill Lube
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| WHMIS Classification | Class D Division 2 Subdivision B - Toxic material causing other toxic effects |

2-Propenoic acid, polymer with 2-propenamide, sodium salt (25987-30-8)
Listed on the Canadian DSL (Domestic Substances List) inventory.
WHMIS Classification | Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Petroleum distillates, hydrotreated light (64742-47-8)
Listed on the Canadian DSL (Domestic Substances List) inventory.
WHMIS Classification | Class B Division 3 - Combustible Liquid
Class D Division 2 Subdivision B - Toxic material causing other toxic effects

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 CPR.

SECTION 16: OTHER INFORMATION

<table>
<thead>
<tr>
<th>Indication of Changes</th>
<th>Revision date 02/26/2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Information</td>
<td>This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200</td>
</tr>
</tbody>
</table>

GHS Full Text Phrases:

| Acute Tox. 3 (Oral) | Acute toxicity (oral) Category 3 |
| Acute Tox. 4 (Dermal) | Acute toxicity (dermal) Category 4 |
| Acute Tox. 4 (Inhalation:dust,mist) | Acute toxicity (inhalation:dust,mist) Category 4 |
| Aquatic Acute 2 | Hazardous to the aquatic environment - Acute Hazard Category 2 |
| Aquatic Acute 3 | Hazardous to the aquatic environment - Acute Hazard Category 3 |
| Aquatic Chronic 2 | Hazardous to the aquatic environment - Chronic Hazard Category 2 |
| Asp. Tox. 1 | Aspiration hazard Category 1 |
| Carc. 1B | Carcinogenicity Category 1B |
| Comb. Dust | Combustible Dust |
| Eye Irrit. 2A | Serious eye damage/eye irritation Category 2A |
| Flam. Liq. 3 | Flammable liquids Category 3 |
| Muta. 1B | Germ cell mutagenicity Category 1B |
| Repr. 2 | Reproductive toxicity Category 2 |
| Skin Irrit. 2 | Skin corrosion/irritation Category 2 |
| Skin Sens. 1 | Skin sensitization Category 1 |
| STOT RE 1 | Specific target organ toxicity (repeated exposure) Category 1 |
| STOT SE 3 | Specific target organ toxicity (single exposure) Category 3 |
| H226 | Flammable liquid and vapor |
| H232 | May form combustible dust concentrations in air |
| H301 | Toxic if swallowed |
| H304 | May be fatal if swallowed and enters airways |
| H312 | Harmful in contact with skin |
| H315 | Causes skin irritation |
| H317 | May cause an allergic skin reaction |
| H319 | Causes serious eye irritation |
| H332 | Harmful if inhaled |
| H336 | May cause drowsiness or dizziness |
### Drill Lube

**Safety Data Sheet**

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>H340</th>
<th>May cause genetic defects</th>
</tr>
</thead>
<tbody>
<tr>
<td>H350</td>
<td>May cause cancer</td>
</tr>
<tr>
<td>H361</td>
<td>Suspected of damaging fertility or the unborn child</td>
</tr>
<tr>
<td>H372</td>
<td>Causes damage to organs through prolonged or repeated exposure</td>
</tr>
<tr>
<td>H401</td>
<td>Toxic to aquatic life</td>
</tr>
<tr>
<td>H402</td>
<td>Harmful to aquatic life</td>
</tr>
<tr>
<td>H411</td>
<td>Toxic to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>

**Party Responsible for the Preparation of This Document**

Economy Polymers & Chemicals  
435 E. Anderson Road Houston, TX 77047  
713-723-8416; 1-800-231-2066

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

North America GHS US 2012 & WHMIS