1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identifier
Product Name 1251 ALMASOL® HIGH TEMPERATURE LUBRICANT

Other means of identification
Synonyms No information available

Recommended use of the chemical and restrictions on use

Identified uses Lubricant
Uses advised against Consumer use

Details of the supplier of the safety data sheet

Manufacturer
Lubrication Engineers Inc.
1919 E. Tulsa
Wichita, KS 67216
USA
800-537-7683

Emergency Telephone Number
CHEMTREC: 1-800-424-9300 (NORTH AMERICA)
+1-703-527-3887 (INTERNATIONAL)
2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label Elements

<table>
<thead>
<tr>
<th>Emergency Overview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal Word</td>
</tr>
<tr>
<td>None</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazard Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
</tr>
</tbody>
</table>

The product contains no substances which at their given concentration, are considered to be hazardous to health

<table>
<thead>
<tr>
<th>appearance</th>
<th>Physical state</th>
<th>Odor</th>
</tr>
</thead>
<tbody>
<tr>
<td>red</td>
<td>Paste</td>
<td>Hydrocarbon-like</td>
</tr>
</tbody>
</table>

Precautionary Statements - Prevention
None.
Response
None.
Eyes
None.
Skin
None.
Inhalation
None.
Ingestion
None.
Fire
None.
Spill
None.
Storage
None.
Disposal
None.

Hazards not otherwise classified (HNOC)
None

• May be harmful in contact with skin

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No.</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diacetone alcohol</td>
<td>123-42-2</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>
4. FIRST AID MEASURES

First Aid Measures

General Advice  
If symptoms develop move victim to fresh air. Show this safety data sheet to the doctor in attendance. Do not breathe dust/fume/gas/mist/vapors/spray.

Eye Contact  
Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing.

Skin Contact  
Consult a physician if necessary. Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

Inhalation  
Move to fresh air. Consult a physician. If not breathing, give artificial respiration.

Ingestion  
May cause adverse kidney effects. Drink plenty of water. Do NOT induce vomiting.

Protection of First-aiders  
Use personal protective equipment.

Most important symptoms and effects, both acute and delayed

Symptoms  
None known.

Indication of any immediate medical attention and special treatment needed

Notes to Physician  
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point  
287 °C / 550 °F

Suitable Extinguishing Media  
Water spray, Carbon dioxide (CO2), Foam, Dry chemical

Unsuitable Extinguishing Media  
Do not use a solid water stream as it may scatter and spread fire.

Specific Hazards Arising from the Chemical

Explosion Data  
Not impact sensitive.

Sensitivity to Mechanical Impact  
May be ignited by friction, heat, sparks or flames.

Sensitivity to Static Discharge

Protective Equipment and Precautions for Firefighters  
Wear self-contained breathing apparatus and protective suit.

NFPA  
Health hazard 1  Flammability 1  Stability 1

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
1251 ALMASOL® HIGH TEMPERATURE LUBRICANT

Issuing Date 04-24-2012  Revision Date 07-03-2018  Revision Number 3.1

Personal Precautions
Do not touch or walk through spilled material. Remove all sources of ignition.

Environmental Precautions
Prevent entry into waterways, sewers, basements or confined areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Methods and material for containment and cleaning up

Methods for Containment
Prevent further leakage or spillage if safe to do so. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.

Methods for Cleaning up
Use personal protective equipment. Take up mechanically and collect in suitable container for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Prevent vapor buildup by providing adequate ventilation during and after use. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions
Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

Incompatible products.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diacetone alcohol</td>
<td>TWA: 50 ppm</td>
<td>TWA: 50 ppm</td>
<td>IDLH: 1800 ppm</td>
</tr>
<tr>
<td>123-42-2</td>
<td></td>
<td>TWA: 240 mg/m³</td>
<td>TWA: 50 ppm</td>
</tr>
<tr>
<td></td>
<td>(vacated) TWA: 50 ppm</td>
<td>TWA: 240 mg/m³</td>
<td>TWA: 240 mg/m³</td>
</tr>
<tr>
<td>Butylated Hydroxy Toluene</td>
<td>TWA: 2 mg/m³</td>
<td>(vacated) TWA: 10 mg/m³</td>
<td>TWA: 10 mg/m³</td>
</tr>
<tr>
<td>128-37-0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silica, quartz</td>
<td>TWA: 0.025 mg/m³</td>
<td>TWA: 50 µg/m³</td>
<td>IDLH: 50 mg/m³</td>
</tr>
<tr>
<td>14808-60-7</td>
<td></td>
<td>(vacated) TWA: 0.1 mg/m³</td>
<td>TWA: 0.05 mg/m³</td>
</tr>
<tr>
<td>Mica (mineral)</td>
<td>TWA: 3 mg/m³</td>
<td>TWA: 3 mg/m³</td>
<td>IDLH: 1500 mg/m³</td>
</tr>
<tr>
<td>12001-26-2</td>
<td></td>
<td>(vacated) TWA: 3 mg/m³</td>
<td>TWA: 3 mg/m³</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>TWA: 10 mg/m³</td>
<td>TWA: 15 mg/m³</td>
<td>IDLH: 5000 mg/m³</td>
</tr>
<tr>
<td>13463-67-7</td>
<td>(vacated) TWA: 10 mg/m³</td>
<td>TWA: 10 mg/m³</td>
<td></td>
</tr>
<tr>
<td>Iron Oxide</td>
<td>TWA: 5 mg/m³</td>
<td>TWA: 10 mg/m³</td>
<td>IDLH: 2500 mg/m³</td>
</tr>
<tr>
<td>1309-37-1</td>
<td>(vacated) TWA: 5 mg/m³</td>
<td>TWA: 5 mg/m³</td>
<td>TWA: 5 mg/m³</td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering Measures
Showers
Individual protection measures, such as personal protective equipment

Eye/Face Protection  Tightly fitting safety goggles.
Skin and Body Protection  Long sleeved clothing. Protective gloves.
Respiratory Protection  No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
Hygiene Measures  Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Property</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Paste</td>
</tr>
<tr>
<td>appearance</td>
<td>red</td>
</tr>
<tr>
<td>Odor</td>
<td>Hydrocarbon-like</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>6 - 8</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>no data available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>287 °C / 550 °F</td>
</tr>
<tr>
<td>upper flammability limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>&lt; 1 ( Air = 1 )</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.95</td>
</tr>
<tr>
<td>Water solubility</td>
<td>negligible</td>
</tr>
<tr>
<td>Partition Coefficient: n-octanol/water</td>
<td>no data available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>not applicable</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

reactivity  No information available

Chemical stability  Stable under recommended storage conditions.
Possibility of Hazardous Reactions  None under normal processing.
Conditions to Avoid  Heat, flames and sparks. Contact with other chemicals
Hazardous Decomposition Products  Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke)

11. TOXICOLOGICAL INFORMATION
**Information on likely routes of exposure**

**Product Information**
Product does not present an acute toxicity hazard based on known or supplied information.

**Inhalation**
May cause irritation of respiratory tract.

**Eye Contact**
Contact with eyes may cause irritation.

**Skin Contact**
May cause irritation.

**Ingestion**
There is no data available for this product.

**Component Information**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diacetone alcohol 123-42-2</td>
<td>&gt; 4 g/kg (Rat)</td>
<td>= 13630 mg/kg (Rabbit) = 13500 mg/kg (Rabbit)</td>
<td>&gt; 7.23 g/m^3 (Rat) 8 h</td>
</tr>
<tr>
<td>Butylated Hydroxy Toluene 128-37-0</td>
<td>&gt; 2930 mg/kg (Rat)</td>
<td>&gt; 2000 mg/kg (Rat)</td>
<td>-</td>
</tr>
</tbody>
</table>

**Information on toxicological effects**

**Symptoms**
No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

The producer of “1251” declares that it contains less than 3% DMSO extractable material by IP-346.

**Sensitization**
No information available.

**Mutagenic Effects**
No information available.

**Carcinogenicity**
No information available.

**Reproductive toxicity**
No information available.

**Target Organ Effects**
Central nervous system (CNS), Respiratory system, Eyes, Liver, Skin.

**Numerical measures of toxicity - Product Information**

The following values are calculated based on chapter 3.1 of the GHS document.

- ATEmix (oral) 5048 mg/kg
- ATEmix (dermal) 2026 mg/kg
- ATEmix (inhalation-dust/mist) 29.8 mg/l

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Algae/aquatic plants</th>
<th>Toxicity to Fish</th>
<th>Toxicity to Microorganisms</th>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diacetone alcohol</td>
<td>-</td>
<td>LC50= 420 mg/L Lepomis</td>
<td>-</td>
<td>EC50 = 8750 mg/L 24 h</td>
</tr>
</tbody>
</table>
Persistence and Degradability
No information available.

Bioaccumulation
.

Mobility
The product is insoluble and floats on water.

Other Adverse Effects
No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Methods
Dispose of in accordance with local regulations.

Contaminated Packaging
Do not re-use empty containers. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

DOT
Not regulated

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>Complies</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>Not determined</td>
</tr>
<tr>
<td>NDSL</td>
<td>Complies</td>
</tr>
<tr>
<td>EINECS</td>
<td>Not determined</td>
</tr>
<tr>
<td>ELINCS</td>
<td>Not determined</td>
</tr>
<tr>
<td>ENCS</td>
<td>Not determined</td>
</tr>
<tr>
<td>IECSC</td>
<td>Complies</td>
</tr>
<tr>
<td>KECL</td>
<td>Not determined</td>
</tr>
<tr>
<td>PICCS</td>
<td>Complies</td>
</tr>
<tr>
<td>AICS</td>
<td>Complies</td>
</tr>
</tbody>
</table>

*TSCA - United States Toxic Substances Control Act Section 8(b) Inventory  
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List  
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
ENCS - Japan Existing and New Chemical Substances
1251 ALMASOL® HIGH TEMPERATURE LUBRICANT

IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Health Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Fire Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Sudden Release of Pressure Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material does not contain any components with a CERCLA RQ.

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations
This product does not contain any substances regulated by state right-to-know regulations

NFPA

<table>
<thead>
<tr>
<th>Category</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td></td>
</tr>
<tr>
<td>Flammability</td>
<td>1</td>
</tr>
<tr>
<td>Stability</td>
<td>1</td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION

Issuing Date 04-24-2012
Revision Date 07-03-2018
Reason for revision Update to Format.

Disclaimer
The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

SDS is available at www.LElubricants.com

End of Safety Data Sheet