Material Safety Data Sheet

Imperial Red-Tac No.2 Lithium Complex Grease

MSDS: Red & Tacky Lithium Complex Grease. Revision #: 3 Revision Date: 10/17/03

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Imperial Red-Tac No.2 Lithium Complex Grease

PRODUCT NUMBER(S):
SYNONYM: Imperial Red & Tacky Lithium Complex Grease NLGI 2

COMPANY IDENTIFICATION

IMPERIAL SALES COMPANY
PO BOX 2366
Dublin, CA 94568
HEALTH (925) 556-5530
(International) (925)556-5530

PRODUCT INFORMATION: MSDS Requests: (925) 556-5530
   Environmental, Safety, & Health Info: (925) 556-5530
   Product Information: (925) 556-5530

2. COMPOSITION/INFORMATION ON INGREDIENTS
CONTAINING

<table>
<thead>
<tr>
<th>COMPONENTS</th>
<th>AMOUNT</th>
<th>LIMIT/QTY</th>
<th>AGENCY/TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severely Refined Petroleum Distillate</td>
<td></td>
<td>5 mg/m3 (mist)</td>
<td>ACGIH TWA</td>
</tr>
<tr>
<td>Chemical Name: Lubricating Base OIL</td>
<td>&gt; 70.00%</td>
<td>10 mg/m3 (mist)</td>
<td>ACGIH STEL</td>
</tr>
<tr>
<td>CAS8042475</td>
<td></td>
<td>5 mg/m3 (mist)</td>
<td>OSHA PEL</td>
</tr>
</tbody>
</table>

PROPRIETARY ADDITIVES and THICKENERS < 30.00%

COMPOSITION COMMENT:
All the components of this material are on the Toxic Substances Control Act Chemical Substances Inventory.

This product fits the ACGIH definition for mineral oil mist. The ACGIH TLV is 5 mg/m3, the OSHA PEL is 5 mg/m3.

3. HAZARDS IDENTIFICATION

IMMEDIATE HEALTH EFFECTS
EYE:
Not expected to cause prolonged or significant eye irritation.

SKIN:
Contact with the skin is not expected to cause prolonged or significant irritation. Not expected to be harmful to internal organs if absorbed through the skin. High-Pressure Equipment Information: Accidental high-velocity injection under the skin of materials of this type may result in serious injury. Seek medical attention at once should an accident like this occur. The initial wound at the injection site may not appear to be serious at first; but, if left untreated, could result in disfigurement or amputation of the affected part.

INGESTION:
Not expected to be harmful if swallowed.

INHALATION:
Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit.

4. FIRST AID MEASURES

EYE:
No specific first aid measures are required because this material is not expected to cause eye irritation. As a precaution remove contact lenses, if worn, and flush eyes with water.

SKIN:
No specific first aid measures are required because this material is not
expected to be harmful if it contacts the skin. As a precaution, remove clothing and shoes if contaminated. Use a waterless hand cleaner, mineral oil, or petroleum jelly to remove the material. Then wash skin with soap and water. Wash or clean contaminated clothing and shoes before reuse.

INGESTION:
No specific first aid measures are required because this material is not expected to be harmful if swallowed. Do not induce vomiting. As a precaution, give the person a glass of water or milk to drink and get medical advice. Never give anything by mouth to an unconscious person.

INHALATION:
If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

NOTE TO PHYSICIANS:
In an accident involving high-pressure equipment, this product may be injected under the skin. Such an accident may result in a small, sometimes bloodless, puncture wound. However, because of its driving force, material injected into a fingertip can be deposited into the palm of the hand. Within 24 hours, there is usually a great deal of swelling, discoloration, and intense throbbing pain. Immediate treatment at a surgical emergency center is recommended.

5. FIRE FIGHTING MEASURES

FIRE CLASSIFICATION:
Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or
combustible.

FLAMMABLE PROPERTIES:

FLASH POINT: >482°F (>250°C)

AUTOIGNITION: NDA

FLAMMABILITY LIMITS (% by volume in air): Lower: NA  Upper: NA

EXTINGUISHING MEDIA:

CO2, Dry Chemical, Foam, Water Fog

NFPA RATINGS: Health 1; Flammability 1; Reactivity 0.

FIRE FIGHTING INSTRUCTIONS:

This material will burn although it is not easily ignited. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

COMBUSTION PRODUCTS:

Normal combustion forms carbon dioxide and water vapor and may produce oxides of calcium and zinc. Incomplete combustion can produce carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES

CHEMTREC EMERGENCY NUMBER (24 hr): (800)424-9300 or (703)527-3887

International Collect Calls Accepted

ACCIDENTAL RELEASE MEASURES:

Clean up spills immediately, observing precautions in Exposure Controls/Personal Protection section.
7. HANDLING AND STORAGE

Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner, or properly disposed of. Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:
Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the workplace when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.
ENGINEERING CONTROLS

Use in a well-ventilated area. If user operations generate an oil mist, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended mineral oil mist exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION:
No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

SKIN PROTECTION:
No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances. Suggested materials for protective gloves include: <Nitrile> <Viton> <Silver Shield>

RESPIRATORY PROTECTION:
No respiratory protection is normally required. If user operations generate an oil mist, determine if airborne concentrations are below the recommended mineral oil mist exposure limits. If not wear a NIOSH approved respirator that provides adequate protection from measured concentrations of this material. Use the following elements for air-purifying respirators: particulate.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION:
Red grease.
pH: NA

VAPOR PRESSURE: <0.01 mm Hg at 100F

VAPOR DENSITY
(AIR=1): Heavier than air.

BOILING POINT: >500F (>260C)

MELTING POINT: >215°C Dropping Point

SOLUBILITY: Soluble in hydrocarbon solvents; insoluble in water.

SPECIFIC GRAVITY: NDA
DENSITY: NDA
VISCOSITY: 18.0-22.0 cSt @ 100°C (Min)

10. STABILITY AND REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS:
None known.
CHEMICAL STABILITY:
Stable.
CONDITIONS TO AVOID:
No data available.
INCOMPATIBILITY WITH OTHER MATERIALS:
May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
HAZARDOUS POLYMERIZATION:
Polymerization will not occur.
11. TOXICOLOGICAL INFORMATION

EYE EFFECTS:
The eye irritation hazard is based on data for a similar material.

SKIN EFFECTS:
The skin irritation hazard is based on data for a similar material.

ACUTE ORAL EFFECTS:
The acute oral toxicity is based on data for a similar material.

ACUTE INHALATION EFFECTS:
The acute respiratory toxicity is based on data for a similar material.

ADDITIONAL TOXICOLOGY INFORMATION:
This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B).

12. ECOLOGICAL INFORMATION

ECOTOXICITY:
The 96-hour LC50 for rainbow trout (Oncorhynchus mykiss) is >1000 mg/l (WAF). The 48-hour EC50 for daphnia (Daphnia magna) is >100 mg/l (WAF). This material is not expected to be harmful to aquatic organisms.

ENVIRONMENTAL FATE:
This material is considered inherently biodegradable. This material is not expected to present any environmental problems other than those associated with oil spills. See Section 6 for Accidental Release Measures.

13. DISPOSAL CONSIDERATIONS

Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

14. TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT SHIPPING NAME: NONE
DOT HAZARD CLASS: NONE
DOT IDENTIFICATION NUMBER: NONE
DOT PACKING GROUP: N/A
ADDITIONAL INFO: Petroleum Lubricating Grease - Not hazardous by US DOT.
ADR/RID Hazard Class - Not applicable

15. REGULATORY INFORMATION

SARA 311 CATEGORIES:

1. Immediate (Acute) Health Effects: NO
2. Delayed (Chronic) Health Effects: NO
3. Fire Hazard: NO
4. Sudden Release of Pressure Hazard: NO
5. Reactivity Hazard: NO

REGULATORY LISTS SEARCHED:

01=SARA 313
02=MASS RTK
03=NTP Carcinogen
04=CA Prop 65-Carcin
05=CA Prop 65-Repro Tox
06=IARC Group 1
07=IARC Group 2A
08=IARC Group 2B
09=SARA 302/304
10=PA RTK
11=NJ RTK
12=CERCLA 302.4
13=MN RTK
14=ACGIH TWA
15=ACGIH STEL
16=ACGIH Calc TLV
17=OSHA PEL
18=DOT Marine Pollutant
19=Chevron TWA
20=EPA Carcinogen
22=TSCA Sect 5(a)(2)
23=TSCA Sect 6
24=TSCA Sect 12(b)
25=TSCA Sect 8(a)
26=TSCA Sect 8(d)
27=TSCA Sect 4(a)
28=Canadian WHMIS
29=OSHA CEILING
30=Chevron STEL
The following components of this material are found on the regulatory lists indicated.

ANTIMONY DIALKYLDITHIOCARBAMATE
   Is found on lists: 01, 11, 14, 28

ZINC OXIDE
   is found on lists: 01, 10, 11,
SEVERELY REFINED PETROLEUM DISTILLATE
   is found on lists: 14, 15, 17,

NEW JERSEY RTK CLASSIFICATION:
Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows:
Petroleum Oil (Grease)

WHMIS CLASSIFICATION:
This product is not considered a controlled product according to the criteria of the Canadian Controlled Products Regulations.

______________________________________________________________________

16. OTHER INFORMATION

______________________________________________________________________

NFPA RATINGS: Health 1; Flammability 1; Reactivity 0;
HMIS RATINGS: Health 1; Flammability 1; Reactivity 0;
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).
REVISION STATEMENT:

This revision updates Section 2 (Composition/Information on Ingredients).

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
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<tbody>
<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
</tr>
<tr>
<td>TWA</td>
<td>Time Weighted Average</td>
</tr>
<tr>
<td>STEL</td>
<td>Short-term Exposure Limit</td>
</tr>
<tr>
<td>TPQ</td>
<td>Threshold Planning Quantity</td>
</tr>
<tr>
<td>RQ</td>
<td>Reportable Quantity</td>
</tr>
<tr>
<td>PEL</td>
<td>Permissible Exposure Limit</td>
</tr>
<tr>
<td>C</td>
<td>Ceiling Limit</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstract Service Number</td>
</tr>
<tr>
<td>A1-5</td>
<td>Appendix A Categories</td>
</tr>
<tr>
<td>NDA</td>
<td>No Data Available</td>
</tr>
<tr>
<td>NA</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>()</td>
<td>Change Has Been Proposed</td>
</tr>
</tbody>
</table>

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the Toxicology and Health Risk Assessment Unit, CRTC, P.O. Box 1627, Richmond, CA 94804

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modification of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.
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