LONG LUB-TEK CORPORATION Material safety data sheet

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Revision Date: 2013/06/01

1.PRODUCT AND COMPANY IDENTIFICATION

LONG LUB TEK CORPORATION

Phone No.: 886-2-26742566 330-12 Sec.1 Zhong Zheng Rd. Sanxia Dist.,

Fax No.: 886-2-26742730 New Taipei City

TAIWAN.

MSDS NO.: PSMSD-843-2 Revision Date: 2013/06/01

Generic Description: Moly grease MS-30

Physical Form: Semi-solid Color: Black

Odor: Mild

NFPA Profile: Health 0 Flammability 1 Instability/Reactivity 0

Note: NFPA = National Fire Protection Association

2.HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS

Acute Effects

Eye: Direct contact may cause temporary redness and discomfort.

Skin: No significant irritation expected from a single short-term exposure.

Inhalation: No significant effects expected from a single short-term exposure.

Oral: Low ingestion hazard in normal use.

Prolonged/Repeated Exposure Effects

Skin: No known applicable information.

Inhalation: No known applicable information.

Oral: No known applicable information.

Signs and Symptoms of Overexposure

No known applicable information.

Medical Conditions Aggravated by Exposure

No known applicable information.

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| 3. COMPOSITION/INFORMAITON ON INGREDIENTS | | | | | |
|---|--------|------------|--|--|--|
| | | CAS No | | | |
| Lubricating base oil | 60~95% | 64742-65-0 | | | |
| MoS ₂ | 2~30% | | | | |
| Performance additive | 2~30% | 68649-42-3 | | | |

4. FIRST AID MEASURES

Eye: If irritation occurs, flush eye(s) with lukewarm gently flowing water for 5 minutes. Obtain

medical attention.

Skin: No health effects expected. If irritation does occur flush with lukewarm, gently flowing water

for 5 minutes. If irritation persists, obtain medical advice.

Inhalation: If symptoms are experienced remove source of contamination or move victim to fresh air. If

irritation persists, obtain medical advice.

Oral: If irritation or discomfort occur, obtain medical advice.

Notes to Physician: Treat according to person's condition and specifics of exposure.

5. FIRE FIGHTING MEASURES

Flash Point: >392 °F / >200 °C (Cleveland Open Cup)

Autoignition Temperature: Not determined.

Flammability Limits in Air: Not determined.

Extinguishing Media: On large fires use dry chemical, foam or water spray. On small fires use carbon dioxide

(CO₂), dry chemical or water spray. Water can be used to cool fire exposed containers.

Fire Fighting Measures: Self-contained breathing apparatus and protective clothing should be worn in fighting

large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed

containers cool.

Unusual Fire Hazards: None.

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6. ACCIDENTAL RELEASE MEASURES

Containment/Clean up: Determine whether to evacuate or isolate the area according to your local

emergency plan. Observe all personal protection equipment

recommendations described in Sections 5 and 8. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbant. Clean area as appropriate since spilled materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbant or cleaning materials appropriately, since spontaneous heating may occur. Local, state and federal laws and regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which federal, state and local laws and regulations are applicable. Sections 13 and 15 of this MSDS provide information regarding certain federal and state requirements.

7. HANDLING AND STORAGE

Use with adequate ventilation. Avoid eye contact.

Use reasonable care and store away from oxidizing materials.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

There are no components with workplace exposure limits.

Engineering Controls

Local Ventilation: None should be needed.

General Ventilation: Recommended.

Personal Protective Equipment for Routine Handling

Eyes: Use proper protection - safety glasses as a minimum. Skin: Washing at mealtime and end of shift is adequate.

Suitable Gloves: Handle in accordance with good industrial hygiene and safety practices.

Inhalation: No respiratory protection should be needed.

Suitable Respirator: None should be needed.

Personal Protective Equipment for Spills

Eye: Use proper protection - safety glasses as a minimum.
Skin: Washing at mealtime and end of shift is adequate.
Inhalation/Suitable No respiratory protection should be needed.

Respirator:

Precautionary Measures: Avoid eye contact. Use reasonable care.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Semi-solid

Color: Black

Odor: Mild

Specific Gravity @ 15°C: 0.956

Dropping Point: none.

Vapor Pressure @ 25°C: Not determined.

Vapor Density: Not determined. Solubility in Water: Not determined.

pH: Not determined.

Volatile Content: Not determined.

Flash Point: >392 °F / >200 °C (Cleveland Open Cup)

Autoignition Temperature: Not determined. Flammability Limits in Air: Not determined.

Note: The above information is not intended for use in preparing product specifications.

10. STABILITY AND REACTIVITY

Chemical Stability: Stable.

Hazardous polymerization will not occur.

Polymerization:

Conditions to Avoid: None.

Materials to Avoid: Oxidizing material can cause a reaction.

Hazardous Decomposition Products

Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: Carbon oxides and traces of incompletely burned carbon compounds.

11. TOXICOLOGICAL INFORMATION

Special Hazard Information on Components

No known applicable information.

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12. ECOLOGICAL INFORMATION

Environmental Fate and Distribution

Air: This product liquid which has a very low vapour pressure (<1 mm Hq). As a result it is unlikely

to become an atmospheric contaminant unless generated as an aerosol.

Water: This product has a very low water solubility (< 100 ppb). As it has a specific gravity of < 1, if

discharged to water, it will initially form a surface film. As the product is non volatile and has a

high binding affinity for particulate matter, it will adsorb to particulates and sediment out.

Soil: If discharged to surface water, this product will bind to sediment. If discharged in effluent to a

> waste water treatment plant, the product is removed from the aqueous phase by binding to sewage sludge. If the sewage sludge is subsequently spread on soil, the product is expected

to degrade.

This product, degrades in soil abiotically to form smaller molecules. These in turn are either Degradation:

> biodegraded in soil or volatilized into the air where they are broken down in the presence of sunlight. Under appropriate conditions, the ultimate degradation products are carbon dioxide and water vapour. Due to the very low water solubility of this product, standard OECD protocols for ready and inherent biodegradability are not suitable for measuring the

biodegradability of this product. The product is removed >80% during the sewage treatment

process.

Environmental Effects

Based on analogy to similar materials this product is expected to exhibit low toxicity to aquatic Toxicity to Water Organisms:

organisms.

Toxicity to Soil Organisms: Experiments show that when sewage sludge is added to soil, it has no effect on soil

micro-organisms, earthworms or subsequent crops grown in the soil.

Bioaccumulation: This product is a liquid and is a high molecular weight polymer. Due to its physical size it is

unable to pass through, or be absorbed by biological membranes. This has been confirmed by

testing or analogy with similar products.

Fate and Effects in Waste Water Treatment Plants

This product or similar products has been shown to be non-toxic to sewage sludge bacteria.

Ecotoxicity Classification Criteria

| Hazard Parameters (LC50 | High | Medium | Low |
|----------------------------|-------|-----------------|-------|
| or EC50) | <=1 | >1 and <=100 | >100 |
| Acute Aquatic Toxicity | <=100 | >100 and <=2000 | >2000 |
| (mg/L) | | | |
| Acute Terrestrial Toxicity | | | |

13. DISPOSAL CONSIDERATIONS

RCRA Hazard Class (40 CFR 261)

When a decision is made to discard this material, as received, is it classified as a hazardous waste? No State or local laws may impose additional regulatory requirements regarding disposal.

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14. TRANSPORT INFORMATION

DOT Road Shipment Information (49 CFR 172.101)

Not subject to DOT.

Ocean Shipment (IMDG)

Not subject to IMDG code.

Air Shipment (IATA)

Not subject to IATA regulations.

15.REGULATORY INFORMATION

Contents of this MSDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA Status: All chemical substances in this material are included on or exempted from listing on the TSCA

Inventory of Chemical Substances.

EPA SARA Title III Chemical Listings

Section 302 Extremely Hazardous Substances (40 CFR 355):

None

Section 304 CERCLA Hazardous Substances (40 CFR 302):

None

Section 311/312 Hazard Class (40 CFR 370):

Acute: No
Chronic: No
Fire: No
Pressure: No
Reactive: No

Section 313 Toxic Chemicals (40 CFR 372):

None present or none present in regulated quantities.

Note: Chemicals are listed under the 313 Toxic Chemicals section only if they meet or exceed a reporting threshold.

16. OTHER INFORMAITON

Prepared by: LONG LUB-TEK CORPORATION

These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.