



MATERIAL SAFETY DATA SHEET

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Revised edition no : 01

P-633 MOLYBDENUM GREASE

Effective Date: 15-7-2014

1 Identification of the Product and the company

Chemical name : Molybdenum Grease
Type of product chemical family : Petroluem Grease
Producer : TLC-KOYA CHEMICALS MANUFACTURING SDN BHD
No. 22 & 23, Jalan Maju 1,
Cemerlang Industrial Estate,
81800. Ulu Tiram, Johor. Malaysia.
Tel: 607-8675798 Fax: 607-8675799
Website: www.koyachemicals.com Email: admin@koyachemicals.com

Emergency phone nr : See producer

2 Hazard Identification

Health hazardous : Harmful if swallowed. Irritating to skin. Risk of serious damage to eyes.
Harmful: danger of serious damage to health, by prolonged exposure and if swallowed.

3 Composition / Information on Ingredients

<u>Common name</u>	<u>Proportion</u>
Base Oils	> 85%
Molybdenum Disulfide	< 5%
Graphite	< 5%
Proprietary Additives	< 5%

4 First Aid Measures

Acute	Swallowed	: This is not expected to be a means of entry during routine operation. Ingestion of small quantities should not cause irritation.
	Eye	: May cause sligh ittitation to the eyes.
	Skin	: May be mildly irritating to the skin, High pressure injection through the skin, when using appatus such as grease guns, can be highly irritating and may cause localized damage.
Inhaled		: No data to indicate a toxic inhalation azard. Inhalation of vapours or mist (generated at elevated temperatures) may cause irritation to the nose and throat. May be harmful if exposed to vapour, mists or fumes resulting from thermal decomposition products.
Chronic First Aid	Swallowed	: Prolonged or repeated skin contact may lead to drying of the skin,
		: If a large quantity is ingested seek medical attention. It may be necessary to induce vomiting, taking extreme care that the person dows not aspirate into the lungs. If aspiration occurs, urgent medical attention should be sought.
	Eye	: Wash with copious amounts of water for 15 minutes and seek medical advice if irritation develops or persists.
	Skin	: Remove contaminated clothing and wash skin thoroughly with plenty of soap and water. High pressure injection through the skin requires urgent medical attention for possible incision, irrigation and/or debridement. Contact with molten material will require treatment by a physician for burns (Do not remove material)
	Inhaled	: Remove person to fresh air and seek medical advice. If not breathing, apply artificial respiration and seek urgent medical aid.
	First Aid Facilities	: Eye wash fountains and safety showers are recommended.
	Advice to doctor	: Treat symptomatically.



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5 Fire-Fighting Measures

Hazards of use / storage	: This product is combustible if preheated
List of dangerous decomposition or combustion	: Combustion products oxidized of carbon, nitrogen phosphorus and zinc.
Fire-fighting recommendations	: Keep storage tanks, pipelines, containers, fire exposed surfaces, etc. cool with water spray.
Type of extinguisher / Fire-fighting agents	: Use foam, carbon dioxide or dry chemical. Do not use water jets.
Precaution	: Water may cause splattering or boil-over.
Protective Clothing	: Self-contained breathing apparatus is recommended during a fire.
Reactivity	: May react with strong oxidising agents.

6 Accidental Release Measures

Personal protection	- Wear PVC-gloves and goggles to contain spillage. Avoid repeated skin contact.
Environment precautions	- Prevent the product contaminating soil and groundwater. Prevent the product entering sewers and waterways. Cfr. Section 12.
Cleaning / recovery	- Large spillages : contain and pump into containers - Small spillages : absorb on sand, earth... and collect into containers for disposal. Disposal should always comply with local, national or EEC regulations. Cfr. Section 13.

7 Handling and Storage

Storage and Transport	: Classified as a combustible solid. Store in a well ventilated area away from ignition sources, oxidising agents, foodstuffs and clothing. Keep containers closed when not in use. Do not store in plastic containers unless approved for this application.
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8 Exposure controls / personal protection

Exposure standards	: If the material is subject to high temperature operations and mists or vapours are generated the Manufacturer recommends: Time Weighted Average (TWA): 5 mg/m ³ (oil mist). Short Term Exposure Limit (STEL): 10mg/m ³ (oil mist). Time Weighted Average (TWA): 5 mg/m ³ Short Term Exposure Limit (STEL): 10mg/m ³
Engineering Controls	: Special ventilation is not normally required. However, in the operation of Certain equipment or at elevated temperatures mists or vapour may be generated and localised exhaust ventilation should be provided to maintain airborne concentration levels below the manufacturer recommended exposure standard.
<u>Personal Protection</u> Respirator Type (AS 1716)	: During routine operation a respirator is not required. However, if mists or vapours are generated, an approved organic vapour/particulate respirator is required.
Glove Type	: PVC. Neoprene or Nitrile gloves are recommended.
Eye Protection	: Safety glasses or goggles are recommended to avoid eye contact. If the material is used at elevated temperatures or under pressure a full face shield should be worn.
Clothing	: During normal operating procedures, long sleeved clothing is recommended to provide skin protection. Soiled clothing should be washed with detergent prior to re-use.



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9 Physical and Chemical Properties

Colour	: Black
Appearance	: Grease
Vapour Pressure (mmHg at 20°C)	: Typically <0.1
Density @ 15°C (g/mL)	: Typically 0.9
Flashpoint (°C)	: >200°C (ASTM D-93)
Flammability Limits (%)	: Not available
Solubility in Water (g/L)	: Not miscible with water

Other Properties

Work Penetration @ 25°C	: 260-295
Dropping Point (°C)	: Typically 260°C
Viscosity @ 40°C (cSt)	: Typically 150

10 Stability and Reactivity

Conditions to avoid	: Stable under the recommended storage conditions. Cfr. Section 7 "Storage". Bacterial degradation can occur if the Product is stored for an unusually long period or is stored under unsuitable conditions.
Materials to avoid	: N/D
Hazardous decomposition products	: N/D

11 Toxicological Information

On product	: Low toxicity is indicated by available data. Under normal industrial conditions, there is no indication that the Product can be considered as a health risk. Skin contact should be avoided to prevent possible long-term or short-term sensitisation.
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12 Ecological Information

Ecotoxicity	: The Product is soluble with water and as such could cover considerable distances if spilled into waterways. Even a small spillage will whiten the appearance of water. Water for sewage treatment, that has been contaminated. with small quantities of the Product, will not affect the biomass. High concentrations may be harmful to fish and micro organisms.
Mobility	: Not established.
Persistence and degradability	: There is only a slow environmental degradation of the Product.
Bioaccumulative potential	: There is seemingly no tendency for bioaccumulation.
Other adverse effects	: Unknown.

13 Disposal Considerations

Spills are easily contained due to the nature of the product. Caution: The product may be slippery. The product should be shovelled into a metal drum and treated as a solid waste. Follow state or local regulations for the disposal of the waste. Clean area with soap and water. Do not allow product to enter drains, sewers or water courses-inform local authorities if this occurs.

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14 Transport Information

General information : This Product is not regulated for road/rail & sea transport.

15 Regulatory Information

Classification and labeling : Classification / symbol - not regulated
Governing directive : Occupational Safety and Health (Classification, packaging and Labeling of Hazardous Chemicals) Regulations 1997.
Safety advice : May contain information in excess of requirements under applicable laws.
S23 Do not breathe gas/fumes/vapor/spray
S24 Avoid contact with skin
S33 Take precautionary measures against static discharges
S62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

16 Other information

NFPA hazard rating
Health : Irritation, minor residual injury (1)
Flammability : Burns only if pre-heated (1)
Reactivity : N/A (0)
Special Hazard : N/A
NPCA HMIS Health : 2 Moderate hazard
PERS. Protect Index : Burns only if pre-heated (1)
Print date : 8-5-2010

N/A - Not Applicable

N/D - Not Determined

All recommendations for the use of our products, whether given by us in writing, orally, or to be implied from data or test results obtained by us, are based on the current state of our knowledge at the time such recommendations are made. When additional information is obtained, these recommendations may be updated. They may also be influenced by circumstances outside our control. Notwithstanding such recommendations, the user is responsible to determine that the product as supplied by us, is suitable for the process or purpose he intends to use it. The user of the product is solely for compliance with all laws and regulation applying to the use of the product. Since we cannot control the application, use or processing of the products, we do not accept responsibility therefore. The user shall ensure that the intended use of the products will not infringe in any party's intellectual property rights.