

SAFETY DATA SHEET (SDS)


Issue Date : 2015-08-06

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Section 1 – IDENTIFICATION

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| PRODUCT NAME: MINERAL BRAKE FLUID |
| OTHER NAMES: Brake disk hydraulic oil |
| RECOMMENDED USE AND RESTRICTIONS ON USE: Industrial lubricants, maintenance oil, HVI hydraulic oil, use to bicycle hydraulic transmission machinery. |
| THE MANUFACTURER · IMPORTER OR SUPPLIER: Company: KUO HORNG Co., LTD. Address: 11F., No.69, Sec. 1, Jianguo N. Rd., Zhongshan Dist., Taipei City 104, Taiwan (R.O.C.) Telephone: +886 2 25076711 (office) +886 4 7990767 (plant) Emergency Tel / Fax: (Tel) +886 4 7990767 (Fax) +886 4 7990221 |

Section 2 – HAZARD(S) IDENTIFICATION

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| PRODUCT HAZARD CLASS: | |
| Physical Hazards | — |
| Health Hazards | Acute toxicity: oral, Category 5; Acute toxicity: inhalation, Category 4; Serious eye damage / eye irritation, Category 2B; Aspiration hazard, Category 1 |
| Environment Hazards | Acute Aquatic Hazard, Category 3 |
| LABEL CONTENT: | |
| Hazard Pictogram | |
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| Signal Words DANGER | |
| Hazard Statements May be harmful if swallowed Harmful if inhaled Causes eye irritation May be fatal if swallowed and enters airways Harmful to aquatic life | |
| Precautionary statements Keep out of the reach of children, Keep container tightly closed. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after disposal. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray. When handling, DO NOT eat, drink or smoke. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Avoid release to the environment. | |
| OTHER HAZARDS: — | |

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Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

MIXTURES:

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|--|---|
| CHEMICAL PROPERTIES: Lubricant | |
| CHINESE AND ENGLISH NAMES OF THE HAZARDOUS INGREDIENTS: | CONCENTRATION OR CONCENTRATION RANGES (INGREDIENT %) |
| Lubricating Base Oil: Petroleum, C ₁₅₋₃₀ , hydrotreated neutral oil-based (72623-86-0) | > 90 |
| Additives | < 10 |

Section 4 – FIRST-AID MEASURES

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| THE FIRST AID MEASURES FOR DIFFERENT EXPOSURE ROUTES: <ul style="list-style-type: none">• Inhalation: Remove to fresh air. Keep person warm and at rest. If not breathing, if irregular breathing, or respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Give nothing by mouth. If unconscious, place in recovery, position and seek medical advice.• Skin contact: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.• Eye contact: Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open.• Ingestion: If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting. |
| THE MOST IMPORTANT SYMPTOMS AND HAZARDOUS EFFECTS: Respiratory tract irritate, eye irritate. |
| THE PROTECTION OF FIRST-AIDERS: Wear gloves and protective clothing which are impervious to the product for the duration of exposure if there is potential for skin contact. |
| NOTES TO PHYSICIANS: If the patient ingest it, treat by gastrolavage. Do not induce vomiting. |

Section 5 – FIRE-FIGHTING MEASURES

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| SUITABLE FIRE EXTINGUISHING MEDIA: Use dry chemical, CO ₂ , water spray, glycol foam, or regular foam. |
| SPECIFIC HAZARDS MAY BE ENCOUNTERED DURING FIRE-FIGHTING: Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Appropriate breathing apparatus may be required. Cool closed containers exposed to fire with water. Do not release runoff from fire to sewers or waterways. |

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SPECIFIC FIRE-FIGHTING METHODS:

1. Use water spray, dry chemical, foam or carbon dioxide.
2. Use water to keep fire-exposed containers cool.
3. If a spill or leak has not ignited, use water spray to disperse the vapors.
4. Water spray may be used to flush spills away from fire and diluted spills to noncombustible proportions.
5. Water spray may cause foaming of hot glycol so indirect application of water spray or use of other extinguishing media should be used on hot glycol.

SPECIAL EQUIPMENT FOR THE PROTECTION OF FIREFIGHTERS:

Fire fighters should wear self-contained breathing apparatus in the positive pressure mode with a full face piece when, there is a possibility of exposure to smoke, fumes or hazardous decomposition products.

Section 6 - ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

Avoid breathing vapor or mist. Make sure the cleaning person have been trained. Restrict people entrance until the releasing area is cleaned. Wear suitable protective equipment.

ENVIRONMENTAL PRECAUTIONS:

All ignition sources should be extinguished. The release area should be ventilated. Corresponding the official government of occupational safety and health or environmental administration.

METHODS FOR CLEANING UP:

Large leak: corresponding the fire emergency and manufacturer for supply.

Section 7 - HANDLING AND STORAGE

HANDLING:

1. Put on appropriate personal protective equipment (PPE). Avoid contact with skin and eyes. Avoid inhalation of vapors and spray mist.
2. Keep away from open flames. No smoking.
3. Workers should wash hands and face before eating, drinking and smoking.
4. Never use pressure to empty: container is not a pressure vessel. Always keep in containers made from the same material as the original one.
5. Comply with the health and safety at work laws.

STORAGE:

1. Store in accordance with local regulations.
2. Keep container tightly closed. Store in a cool, well-ventilated area away from incompatible materials and ignition sources.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

1. Handle in the presence of adequate ventilation.
2. Engineering controls should be used whenever feasible to maintain concentrations below acceptable exposure criteria, including enclosures and local exhaust ventilation.

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| CONTROL PARAMETERS | | | |
|--|-----------------------------------|-----------------------------------|-----------------------------|
| 8 hours time weighted average exposure limits (TWA) | Short-term exposure limits (STEL) | Maximum exposure limits (CEILING) | Biological standards (BEIs) |
| 5 mg/m ³ | — | — | — |
| PERSONAL PROTECTION EQUIPMENT (PPE): | | | |
| <ul style="list-style-type: none"> ● Respiratory protection: If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. <ul style="list-style-type: none"> ① 50 mg/m³, Use the report of efficient filtration of filtration masks, gas supply nose cup. ② 125 mg/m³, Use the oxygen gas supply nose cup, report of efficient filtration masks for total cover type. ③ 250 mg/m³, Use the gas supply nose cup, report of efficient filtration masks for total cover type, bring apparatus for total cover type. ④ 2500 mg/m³, Use the positive pressure air feed mask. ⑤ If unknown concentrations or has an immediate hazard, use the positive pressure air feed mask, bring apparatus for total cover type. ⑥ Escaping, Use the report of efficient filtration of filtration masks, bring apparatus. ● Hands protection: For prolonged or repeated handling, use gloves: nit rile. ● Eye protection: Use safety eyewear designed to protect against splash of liquids. ● Skin and body protection: Barrier creams may help to protect the exposed areas of the skin, but should not be applied once exposure has occurred. | | | |
| HYGIENE MEASURES: | | | |
| <ol style="list-style-type: none"> 1. Take off contaminated cloth immediately, Launder contaminated clothing before reuse. 2. Do not eating and smoking at working place. 3. Wash hands thoroughly. Keep housekeeping. | | | |

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

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| Appearance (physical state, color, etc.): Red clean liquid, Viscosity: 11.65 mm ² /s@40°C | |
| Odor: Characteristic | Odor threshold: — |
| pH value: Not applicable | Melting point: — |
| Flammability (solid, gas): — | Boiling point / Boiling point range: > 200°C(IBP) |
| Decomposition temperature: — | Flash point: 162°C Test method: Open cup |
| Auto-ignition temperature: — | Explosion limits: 1.0% ~ 7.0% |
| Vapor pressure: — | Vapor density: — |
| Density: 0.8630 g/cm ³ @15°C | Solubility: Insoluble in cold water |
| Partition coefficient (n-octanol / water, log K0w): — | Evaporation rate: — |

Section 10 - STABILITY AND REACTIVITY

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STABILITY: Stable under recommended storage and handling conditions.

POSSIBLE HAZARDOUS REACTIONS UNDER SPECIFIC CONDITIONS:

Oxidant (ex: perchloric acid, nitrate, botanic acid) may cause risk of fire explosion.

CONDITIONS TO AVOID:

Spark, High-heat, Inflaming.

MATERIALS TO AVOID:

OXIDIZING AGENTS, strong alkalis, strong acids.

HAZARDOUS DECOMPOSITION PRODUCTS:

carbon monoxide, carbon dioxide, smoke, oxides of nitrogen.

Section 11 - TOXICOLOGICAL INFORMATION

ROUTES OF EXPOSURE: Inhalation, Skin Contact, Eye Contact, Ingestion.

SYMPTOMS:

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage.

ACUTE TOXICITY:

• **Inhalation:**

Inhalation hazard is increased at higher temperatures. Inhalation of oil droplets/ aerosols may cause discomfort and may produce chemical pneumonitis. Viscosity: 11.65 mm²/s@40°C.

• **Skin:**

The material may accentuate any pre-existing dermatitis condition.

• **Eyes:**

Although the liquid is not thought to be an irritant, direct contact with the eye may produce transient discomfort characterized by tearing or conjunctiva redness (as with windburn).

• **Ingestion:**

Ingestion may result in nausea, abdominal irritation, pain and vomiting.

LD₅₀ : > 5000 mg/kg (Rat, Oral)

LD₅₀ : – mg/kg (Rat/Rabbit, Skin)

LC₅₀ : – mg/m³/hr (Rat, Inhalation)

CHRONIC TOXICITY OR LONG TERM TOXICITY:

• **Inhalation:** If people exposure at high temperature with its mist will be harmed.

• **Skin:** Human exposure through skin eczema.

• **Eyes:** Steam and mist may irritate eyes.

• **Ingestion:** Ingestion maybe harmfulness.

Histologically there may be intercellular oedema of the spongy layer (prognosis) and intracellular oedema of the epidermis.

The substance is classified by IARC as Group 3: NOT classifiable as to its carcinogenicity to humans.

The preparation has been assessed following the conventional method of the EU Directive 67/548/EEC.

Evidence of carcinogenicity may be inadequate or limited in animal testing.

Section 12 - ECOLOGICAL INFORMATION

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| <p>ECOTOXICITY: Do not allow to enter drains or watercourses. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.</p> <p>LC₅₀ (Fish) : – mg/L/96H EC₅₀ (Daphnia magna) : – mg/L/48H ErC₅₀ (algae) : – mg/L/72H BCF : – log K_{OW} : – BOD (5 days) / COD : – NOEC > – mg/L</p> |
| <p>PERSISTENCE AND DEGRADABILITY: It can not be resolved in the water, air and soil.</p> <p>Half-life (Air) : – Half-life (Surface water) : – Half-life (Ground water) : – Half-life (Soil) : –</p> |
| <p>BIO-ACCUMULATIVE POTENTIAL: –</p> |
| <p>MOBILITY IN SOIL: –</p> |
| <p>OTHER ADVERSE EFFECTS: –</p> |

Section 13 - DISPOSAL CONSIDERATIONS

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| <p>METHODS OF WASTE DISPOSAL:</p> <ol style="list-style-type: none"> 1. Dispose of according to all federal, state and local applicable regulations. 2. Treat by food storage for the waste. 3. Treat by special incineration or safety and hygiene cover up. 4. Do not allow to enter drains or watercourses. |
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Section 14 - TRANSPORT INFORMATION

| United Nations number (UN No.): – | | | | | |
|--|--|----------------------|-------|---------------|-------|
| UN Proper shipping name: – | | | | | |
| Transport hazard class(es): – | | | | | |
| Packing group: – | | | | | |
| Marine pollutant (Yes / No): – | | | | | |
| Regulatory | UN number | Proper shipping name | Class | Packing group | Label |
| ADR / RID | This material is not classified as dangerous under ADR/ RID regulations. | | | | |
| AND / ADN | This material is not classified as dangerous under AND/ ADN regulations. | | | | |
| IMDG | This material is not classified as dangerous under IMDG-code regulations. | | | | |
| ICAO / IATA-DGR | This material is not classified as dangerous under ICAO/ IATA-DGR regulations. | | | | |
| Specific transport measures and precautionary conditions: – | | | | | |

Section 15 - REGULATORY INFORMATION

GHS-SDS : Mineral Brake Fluid

V1.0

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APPLICABLE REGULATIONS:

1. Hazardous and deleterious substances for common knowledge law.
2. Traffic safety law.
3. Labor's safety and hygiene facilities law.
4. The standard of industrial waste disposal and facilities.
5. This preparation is not classified as dangerous according to the EC Directive 88/379/EEC.

Section 16 - OTHER INFORMATION

LITERATURE REFERENCES:

1. Globally Harmonized System of Classification and Labeling of Chemicals [GHS]
2. Recommendations on the Transport of Dangerous Goods – Model Regulations
3. ANSI Z 129.1-1994 American National Standards Institute
4. IARC MONOGRAPHS ON THE EVALUATION OF THE CARCINOGENIC RISK OF CHEMICALS TO HUMANS VOLUME 33
5. EC Directive 67/548/EEC

ORGANIZATION THAT PREPARED THE SDS:

Name: KUO HORNG Co., LTD. (Changhua plant)

Address / telephone number: No.8, Gong Ba Roab, Chuan Shing Industrial Park, Shen Guang Hsiang, Changhua Hsien, Taiwan, R.O. C. (Tel) +886 4 7990767

PERSON WHO PREPARED THE SDS:

Title: Safety & Quality Assurance Chief

Name (signature): Mr. Hsiao jen chung

DATE THAT THE SDS WAS PREPARED:

2015-08-06

REMARK:

1. The symbol in the above particulars “—”, represents “Not Available” .
2. Revised data:
 - ① Creating and according to GHS, V1.0 edition, 2013-10-15.

※ *The information in this MSDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It always is the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. The information in this MSDS is meant as a description of the safety requirements of our product: it is not to be considered a guarantee of the product's properties.*