

# HEAT TRANSFER OIL MATERIAL SAFETY DATA SHEET

## 1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Heat transfer oil

PRODUCT USAGE: Suitable for small electric heating device

SUPPLIER: ZHENHAI PETROCHEMICAL HAIDA DEVELOPMENT CO., LTD  
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## 2. HAZARDS IDENTIFICATION

This product is not considered hazardous according to regulatory guidelines GB6944-86 and GB13690-92 provided by the People's Republic of China

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Finely cleaned mineral oil and additives, without PCB (polychlorinated biphenyl), and not including any harmful ingredients to health or environment.

| MATERIALS                                   | CAS#       | APPROXIMATE PERCENT OF TOTAL WEIGHT(%) |
|---|------------|--|
| Base stock, the stock of lubrication        | 74869-22-0 | 80.30                                  |
| Distillates (petroleum), light hydrocracked | 64741-77-1 | 19.20                                  |
| 2,6-Di-tert-butyl-4-methylphenol            | 128-37-0   | 0.25                                   |
| Poly(alpha-Olefins)                         | 68527-08-2 | 0.25                                   |

| IMPURITY   | CAS#      | Ratio (mg/kg) |
|--|-----------|---------------|
| Cadmium(Cd)                                      | 7440-73-9 | ND            |
| Lead(Pb)   | 7439-92-1 | 3             |
| Mercury(Hg)                                      | 7439-97-6 | ND            |
| Hexavalent Chromium(CrVI) by alkaline extraction |           | ND            |
| Sum of PBBs                                      |           | ND            |
| Sum of PBDEs                                     |           | ND            |
| Sum of PBDEs (Mono to Deca)                      |           | ND            |

See Section 8 for other safety details.

## 4. FIRST AID MEASURES

EYE CONTACT: Flush thoroughly with water. If irritation occurs, call a physician.

SKIN CONTACT: Wash contact areas with soap and water.

INHALATION: Not expected to be a problem. However, if necessary, go to a place with fresh air and that will be alright.

INGESTION: Not expected to be a problem. Seek medical attention if

discomfort occurs.

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## 5. FIRE-FIGHTING MEASURES

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### EXTINGUISHING MEDIA:

For small fire --- Use Carbon dioxide, dry chemical or "1211" fire extinguisher.

For big fire --- Use carbon dioxide, dry chemical, foam or water fog. In the fire, carbon oxide or other poisonous gas might be generated, therefore, fire fighters must use self-contained breathing apparatus.

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## 6. ACCIDENTAL RELEASE MEASURES

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In case of leakage, shut off source taking normal safety precautions. Take measures to minimize the effects on ground water. Recover by pumping or contain spilled material with sand or other suitable absorbent and remove mechanically into containers. If necessary, dispose of adsorbed residues as directed in Section 13. Take normal safety precautions to prevent the released or spilled material entering into sewers or rivers and if this does happen, need to recover as soon as possible and report to the relevant authorities.

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## 7. HANDLING AND STORAGE

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Keep the product in dry containers tightly closed when not in use. Prevent contact with water or strong oxidants.

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## 8. PERSONAL PROTECTION

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The workshop or workplace must be kept well ventilated with fresh air. Though the product does not contain any explosive ingredients, it is recommended to control the quantity of its mists below 5.00mg/m<sup>3</sup>.

No special precautions are necessary beyond normal good hygiene practices. See Section 4 for additional personal protection.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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Typical physical properties are given below.

APPEARANCE: Liquid

COLOR: clear, transparent and free from suspended matter

ODOR: Mild

INITIAL BOILING POINT: 320C

INITIAL FLASH POINT: 170C

FIRE POINT: 180C

COPPER STRIP CORROSION (100C, 3h): 1a

MOISTURE (mg/kg): Max 115

POUR POINT: Max. -15C

DENSITY (20C, kg/m<sup>3</sup>): 878.6

KINEMATIC VISCOSITY (40C, mm<sup>2</sup>/s): 21.14

SOLUBILITY IN WATER: Negligible

OXIDIZING PROPERTIES: NA  
VAPOR PRESSURE (20C): Max 0.1mmHg

The product has a neutral property.

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#### 10. STABILITY AND REACTIVITY

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STABILITY (THERMAL, LIGHT, ETC.): Stable.

CONDITIONS TO AVOID: Extreme heat and should be used at a temperature below 260C.

INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers and water.

Carbon oxide or other poisonous gas might be generated when the product is not fully burned.

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#### 11. TOXICOLOGICAL DATA

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The product does not contain any poisonous ingredients that are included in the regulatory guideline GB6944-86 and GB13690-92 provided by the People's Republic of China.

---ACUTE TOXICOLOGY---

ORAL TOXICITY (RATS): Practically non-toxic (LD50: greater than 2000 mg/kg).

DERMAL TOXICITY (RABBITS): Practically non-toxic (LD50: greater than 2000 mg/kg).

INHALATION TOXICITY (RATS): Harmful concentrations of mists (vapors) are unlikely to be encountered through any customary or reasonably foreseeable handling, use or misuse of the product.

EYE IRRITATION (RABBITS): Practically non-irritating.

(Draize score: 0 or greater but 6 or less).

SKIN IRRITATION (RABBITS): Practically non-irritating. (Primary Irritation Index: greater than 0.5 but less than 3).

---SUBCHRONIC TOXICOLOGY---

Extensive evaluations including microscopic examination of internal organs and clinical chemistry of body fluids, showed no adverse effects.

---CHRONIC TOXICOLOGY---

Chronic mouse skin painting studies of these products showed no evidence of carcinogenic effects.

---SENSITIZATION---

This product has not caused skin sensitisation in rabbits.

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#### 12. ECOLOGICAL INFORMATION

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This product is expected to be inherently biodegradable by the micro-organisms and bioaccumulation is unlikely due to the very low solubility of this product, therefore adverse effects to aquatic organisms & plants are not expected from this product.

When released into the environment, adsorption to sediment and soil will be the predominant behaviour and thus not harmful to the environment.

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### 13. DISPOSAL CONSIDERATIONS

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Upon recovery, the wastes can be used as other products after being processed by a suitable recycling facility. Any limited residues left can be burned in an enclosed, controlled burner.

Wastes must be disposed of at an appropriate waste disposal facility, not to be disposed of at anywhere else.

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### 14. TRANSPORT INFORMATION

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This product is not classified as a hazardous substance in the course of land, sea and air transport. Transportation requires special containers for oil or closed steel containers.

UN Dangerous Goods Code: Not applicable  
UN Transport name: Not applicable  
UN Hazard classification: Not applicable  
Packaging group: Not applicable  
Marine pollutants: Not applicable

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### 15. REGULATORY INFORMATION

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GB6944-86, Classification and code of dangerous goods

GB12268-90, List of dangerous goods

GB13690-92, Classification and labels of dangerous chemical substances commonly used

These above are provided by the People's Republic of China

The hazardous goods are classified globally in accordance with the suggestions by the Committee of Hazardous Goods Transportation Specialists of the United Nation.

The product has been registered with a trademark of "HD".

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### 16. OTHER INFORMATION

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Prepared by: ZHENHAI PETROCHEMICAL HAIDA DEVELOPMENT CO., LTD

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