



SAFETY DATA SHEET (SDS)

1. Identification of the substance/mixture and of the company/undertaking

Product Name: Mantherm IBP
Other Name: Isopropyl biphenyl mixture
Suggested applications and limited use: High temperature heat transfer oil, etc.
Manufacture: Jiangsu Manto Chemistry Room B, Floor 11, Building No.1, Beitanghe Road No.8, Hengsheng Science & Technology Park, Tianning District, Chanzhou City, Jiangsu Province, China Tel: +0086-0519-85760560

2. Hazards identification

Hazard description: Although this product has a relatively high flash point, it is not classified as a flame retardant oil. There is a risk of burning in case of open flame. This product has mild irritation to the skin, high concentration contact, respiratory tract and eye irritation.
Classification of the substance or mixture: According to the chemical classification, warning label and warning specification series standards(See Part 15), This product belongs to skin corrosion/irritation-2, specific target organ system toxicity single exposure-3, hazards to water environment-acute 1, hazards to the water environmentlong-term and chronic 1.
Labelling: Hazard pictograms  Signal word: Warning Hazard statements: Swallowing may be harmful, may cause skin irritation, cause severe eye irritation, may cause respiratory irritation; Harmful to aquatic life and has long lasting effects.
Signal word: Warning
Precautionary statements: Prevention: Operators must be specially trained and strictly abide by the operating procedures. It is recommended that operators wear protective gloves, masks, and chemical safety glasses. Clean thoroughly after operation. Avoid inhaling gas/aerosol/steam/spray, only use in a well-ventilated place to avoid release into the environment. Keep away from fire. No smoking in the workplace. Use explosion-proof ventilation systems and equipment.

**Response:**

Fire fighters shall wear gas masks and full-body fire suits to extinguish fires in the upwind direction.

If possible, move the container from the fire to an open area. Spray water to keep the fire container cool until the fire is over. Containers in the fire site must be evacuated immediately if they are discolored or produce sound from the safety relief device. Use foam, carbon dioxide, dry powder, sand to extinguish the fire.

Security storage:

Store in a cool and ventilated warehouse. Stay away from fire and heat sources. The temperature in the warehouse should not exceed 30 °C . Protect from direct sunlight. Keep the container sealed. Should be stored separately from oxidant. Lighting, ventilation and other facilities in the warehouse should be explosion-proof, and the switch should be located outside the warehouse. Equipped with corresponding varieties and quantities of fire-fighting equipment.

Waste disposal:

This product or its containers shall be disposed of according to local laws and regulations.

Physical and chemical hazards:

This product is flammable and irritating. Its steam and air form an explosive mixture, which will cause combustion and explosion when exposed to open fire and high heat energy. Can react with oxidant.

Health hazards:

Poisoning reactions are mainly manifested as symptoms of nervous system and digestive system, such as dizziness, headache, dizziness, lethargy, nausea, vomiting, etc., and sometimes liver dysfunction may occur. High concentration contact has obvious irritation to respiratory tract and eyes. Long-term contact may cause headache, fatigue or respiratory irritation.

Environmental hazards:

It is harmful to the environment and may pollute the air, water environment and water source.

3. Composition/information on ingredients**Substances :mixture**

Chemical Name	Concentration (%w/w)	CAS-No
Diisopropyl biphenyl	≥80	69009-90-1
Isopropyl biphenyl	≤20	25640-78-2

4. First aid measures**In case of skin contact:**

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water.

In case of eye contact:

Immediately lift eyelids and rinse thoroughly with plenty of running water or saline for at least 15 minutes and seek medical advice.

If inhaled:

Quickly remove from scene to fresh air. Keep your airway clear. Administer oxygen if breathing is difficult. If breathing stops, give artificial respiration immediately. Seek medical advice.

**If swallowed:**

Drink plenty of warm water to induce vomiting. Seek medical advice.

5. Firefighting measures**Special hazards arising from the substance or mixture:**

There is a risk of combustion and explosion in case of open flame.

Extinguishing media:

Use foam, dry powder, carbon dioxide, sand to extinguish the fire. If possible, move the container from the fire to an open area.

Advice for firefighters:

Fire personnel must wear self-contained positive pressure breathing apparatus, wear full firefighting clothing, and fight the fire at a safe distance and upwind. If possible, move the container from the fire to an open area. Isolate the accident site and prohibit irrelevant personnel from entering. Contain and treat firewater to prevent environmental pollution.

6. Accidental release measures**Personal precautions:**

It is recommended that emergency personnel wear self-contained positive pressure breathing apparatus, protective goggles, chemical protective gloves, and general fire protective clothing. Quickly evacuate the personnel from the contaminated area to the safety zone, isolate them, and strictly restrict access. Cut-out fire. Cut off the source of leakage as much as possible. Eliminate all ignition sources.

Environmental precautions:

Contain leaks to avoid environmental pollution. Prevent spills from entering sewers, surface water and groundwater.

Methods and material for containment and cleaning up:

Isolate the contaminated area of leakage and restrict access. Eliminate all ignition sources. If a small amount of leakage occurs, use sand or other non-combustible materials to adsorb or absorb. If a large amount of leakage occurs, build an embankment or dig a pit to contain it. Transfer to a tank truck or special collector with an explosion-proof pump for recycling or transport to a waste disposal site.



7. Handling and storage

Precautions for safe handling:

Closed operation, providing good natural ventilation conditions. Operators must be specially trained and strictly abide by the operating procedures. It is recommended that operators wear chemical safety glasses, protective clothing, and chemical-resistant gloves. Keep away from fire and heat. No smoking in the workplace. Use explosion-proof ventilation systems and equipment. Avoid contact with oxidants. When handling, light loading and unloading should be done to prevent damage to packaging and containers. Equipped with the corresponding variety and quantity of fire equipment and leakage emergency treatment equipment. Empty containers may have harmful residues.

Advice on protection against fire and explosion:

Store in a cool, ventilated warehouse. Keep away from fire and heat. Should be stored separately from oxidizer, do not mix storage. Explosion-proof lighting and ventilation facilities are adopted. Do not use mechanical equipment and tools that are prone to spark. Storage areas should be equipped with suitable materials to contain leaks.

8. Exposure controls/personal protection

Exposure limit value:

MAC (mg/m ³): No data	PC-TWA (mg/ m ³): No data
PC-STEL (mg/ m ³): No data	TLV-C (mg/ m ³): No data
TLV-TWA (mg/ m ³): No data	TLV-STEL (mg/ m ³): No data

Biological limitation: No data

Monitoring method: Gas chromatography

Engineering control: Provides good natural ventilation

Personal protective equipment: No data

Respiratory protection: When the concentration of steam in the air exceeds the standard, it is recommended to wear a self-priming filter protective mask.

Eye protection: Wear chemical safety glasses

Skin and body protection: Wear protective clothing

Hand protection: Wear chemical-resistant gloves

9. Physical and chemical properties

Appearance and character: White or light yellow liquid, low toxicity

PH: neutral	Fusing point (°C): ≤-35
Boiling point (°C): 333	Density (g/cm ³): 0.950-0.955 (20°C)
Relative vapor density (air=1): no data	Relative density (water=1): 0.950-0.955
Heat of combustion (kJ/mol): no data	Critical temperature (°C): 486
Critical pressure (MPa): 1.5	Auto-ignition temperature (°C): ≥400
Flashpoint (°C): 171	Partition coefficient: n-octanol/water (log P): no data



Combustibility: flammable

Solubility: Insoluble in water, soluble inorganic solvents such as benzene and alcohol.
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10. Stability and reactivity

Chemical stability: This product is stable when stored and used at normal ambient temperature.

Incompatible materials: Strong oxidizing agents.

Conditions to avoid: Open flame, electrostatic discharge, high heat, etc.
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Possibility of hazardous reactions: Contact with prohibited compounds such as strong oxidants may cause fire and explosion.
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Hazardous decomposition products: no data.

11. Toxicological information

Acute toxicity:

LD50: no Data

LC50: no Data

Skin irritation: no data

Eye irritation: no data

Respiratory or skin Sensitization: no data

Germ cell mutation: no data

Carcinogenicity: no data

Reproductive toxicity: no data

Specific target organ systemic toxicity-single contact: no data
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Specific target organ systemic toxicity-repeated contact: no data
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12. Ecological information

Ecological toxicity: no data

Persistence and degradability: no data

Bioaccumulative potential: no data

Mobility in soil: no data

13. Disposal considerations

Waste treatment methods

Product: Recycling as much as possible. If it cannot be recycled, it shall be disposed by controlled incineration. Do not dispose of this product by discharging it into the sewer.
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Contaminated packaging: Return the emptied containers to the manufacturer or dispose of them according to national and local regulations.
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Disposal precautions:

Refer to relevant national and local laws and regulations before disposal. See Part VIII for the safety precautions for the disposal personnel.



14. Transport information

International Regulations
IATA-DGR: Not regulated as a dangerous good
IMDG-Code: Not regulated as a dangerous good
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable for product as supplied
Domestic regulation
49 CFR: Not regulated as a dangerous good
Special precautions for user: Not applicable

15. Regulatory information

The following laws, regulations, rules and standards have made corresponding provisions for the management of the chemical:

Chemical safety technical specification content and project sequence (GB/T 16483-2008)

Classification and marking of commonly used hazardous chemicals (GB13690-2009)

List of dangerous goods (GB12268-2012)

General technical conditions for the transportation and packaging of dangerous goods (GB12463-2009)

16. Other information

Revision note: This SDS is in accordance with the Contents and Project Sequence of Chemical Safety Technical Instructions (GB/T16483-2008). Since the country has not yet issued the GHS classification catalogue of chemicals, the GHS classification of chemicals in this SDS is made by enterprises according to the series of standards of chemical classification, warning labels and warning instructions (GB20576-2006 ~GB20602-2006). After the promulgation of the national GHS classification catalogue of chemicals, corresponding adjustments will be made.

Full text of abbreviations:

MAC: Refers to the workplace, at anytime during a working day, the concentration of toxic chemicals should not be exceeded

PC-TWA: Permissible concentration-Time Weighted verage

PC-STEL: Permissible Concentration-Short Term Exposure Limit

TLV-C: Threshold limit value-celling

TLV-TWA: Threshold limit value-time weighted) average

TLV-STEL: Threshold limit value-short term exposure limit

IARC: International Agency for Research on Cancer

RTECS: Registry of Toxic Effects of Chemical Substances

HSDB: Hazardous Substances Data Bank

ACGIH: American Conference of Governmental Industrial Hygienists

Further information:

State Administration of Work Safety Chemical Registration Center in this MSDS comprehensive and true all relevant information is provided, but we cannot guarantee its absolute comprehensiveness



and accuracy. This MSDS provides safety precautions for this product only to those who are properly trained and use the product. The individual user who obtains the MSDS must make an independent judgment on the suitability of the MSDS under the particular conditions of use. In the case of special use, the chemical Registration Center will not be responsible for any injury caused by the use of this MSDS.

Reference:

Safety Technology of hazardous chemicals (Published by Chemical Industry Press)

Chemical Toxicity Regulations Environmental Data Manual (Published by China Environmental Science Press)

List of dangerous goods (2005)

Classification of commonly used hazardous chemicals (GB13690-2009)

Safety manual for commonly used chemical hazards (written by Weifan Zhang and Haifeng Zhang)

2	2025/1/13	Update Part 9 data basedon the latest TDS (A-1)	Jevin Ryu
1	2024/8/2	Version confirmation (A-1)	Jevin Ryu
NO.	Date	Correction items	Reviewer