

Material Safety Data Sheet

1. Product and Company identification

Product

Product name: Magnetic Fluid

Information of the manufacturer

Company name:

Address: Japan

Name of section: Research and Development

Telephone number:

Facsimile number:

Emergency number:

2. Hazards Identification

Important danger and Hazard

Adverse human health effects: May create toxic gas above 170-200 degrees Celsius.

Physical and Chemical hazards: Not categorised as dangerous goods.

Specific Hazards: No data

Class name of GHS

GHS category: NA

Handling: Prevent inhalation of vapour

Precautions: Use protection gloves, goggles and face shield. Please read safety data sheet carefully before use.

Accidental release measures

Inhalation: Move to an area of clean air area and rest in a comfortable position.

Skin contact: Wash with plenty of soap and water.

Eye contact: Wash carefully with water for at least 15 minutes.

Swallow: Wash mouth out with water and drink some water or milk.

Seek doctor advice in the following cases;

Eye contact, swallow, skin irritation, nausea and other physical symptoms, or suspected exposure to the chemical.

3. Composition / Information if ingredients

| | | |
|--|--|---|
| Substance or Mixture: | Mixture | |
| Chemical name: | Per fluoro Polyether | Manganese Zinc Ferrite |
| CAS number | 25038-02-2 | Fe ₂ O ₃ —1309-37 MnO---1344-43-0 ZnO---1314-13-2 |
| Concentration: | 65-85 | 15-35 |
| Chemical structure: | F-(CF ₂ O) _n CF ₃ | (MnO) ₁ (ZnO) _m Fe ₂ O ₃ |
| Reference number in Gazetted List in Japan: | Can not specified | |
| TSCA registration: | Registered | |
| EINECS number: | NA | |

4. First Aid Measures

Inhalation: In the case of inhalation toxic gases has occurred, move victim immediately to an area of fresh air, find a comfortable resting position, and seek doctor's advice.

Skin Contact: Wash the area with water and soap.

Eye Contact: Wash with plenty of clean water and seek doctor's advice.

Ingestion: Rinse mouth out with water and give a glass of water or milk to drink, and then seek doctor's advice. If the victim is unconscious, do not give them anything to drink.

5. Fire Fighting Measures

Extinguishing media: Non-flammable. It may form a toxic gas above 170-200 degrees Celsius; keep away from flame in case of fire.

Method of extinguisher: Move container from fire if safe to do so and use extinguishing media. Stay upwind as much as possible and use appropriate protection (gloves, goggles, gas mask etc)

6. Accidental release measures

Precautions for chemical contact, protection and first aid:

Use protection for inhalation and use other protection if necessary.

Environmental precaution: Avoid discharge of free liquid in sewage systems and undergrounds waterways. Avoid the discharge of the released product to the water catchment area.

Method of clean up:

Large quantity: Prevent further discharge from the container and if possible put the discharge back into the container or absorb the released liquid with rags, sand or sawdust and then wipe well with rags.

Small quantity: Absorb the released liquid with rags, sand or sawdust and then wipe well with rags.

7. Handling and Storage

Handling:

Handle outside or provide working area with adequate ventilation systems.

Use gloves / goggles / gas mask

Do not eat, drink or smoke while handling the product.

Keep away from fire.

Wash hands and face well and gargle after handling.

Storage:

Shield the container and store in a cool, well ventilated area.

Avoid direct sun and rain.

Keep away from fire

8. Expose controls/ Personal protection

Engineering Measures:

Provide working areas with adequate ventilation systems if there is any possibility of toxic gas at high temperature.

Provide water-wash system, eye-bath and emergency showers and indicate the position.

Exposure Limits:
Control Parameter: No data.
Limit Parameter: No data

Personal Protective equipment:
Respiratory protection: Use appropriate protection as there is possibility of toxic gas to occur above 170-200 degrees Celsius.
Hand protection: Protection gloves (impermeable)
Eye protection: Safety goggles and face shield.
Skin and body protection: Protection approved by occupational hygiene standard, rubber boots, apron (suitable for organic solvent) etc.

9. Physical and Chemical properties

Physical state, colour: Liquid, black
Odour: Odourless
Flashing point: NA
Auto Ignition point: NA
Exclusivity range: No data
Specific gravity at 20 degrees Celsius: 1.8-2.5
Solubility: Water - Insoluble, Ethanol - Insoluble

10. Stability and Reactivity

Stability: Stable under normal conditions
Reactivity: Non-reactive
Possibility of hazardous reaction: No data

11. Toxicological information:

Acute toxicity: No data

12. Ecological information

No available data

13. Disposal consideration.

Waste treatment: Incinerate according to regulations/law
Entrust local government approved waste disposal companies with disposal.

Contaminated containers: dispose with approved waste disposal companies after thoroughly removing contents.

14. Transport information

UN class: NA

Use robust and stable containers, seal for transport.

Make sure containers are not leaking and secure load to prevent shifting.

Avoid exposure to direct sunlight.

15. Regulatory information

Fire Service ACT: NA

Poisonous and Deleterious Substances Control Act: Not classified

IMO/ICAO: Not classified

IATA: Not classified

16. Others

The information contained herein is based on several references and represents the present state of our knowledge; however, the MSDS does not always cover all information about the product, so handle the product carefully.

The information applies to ordinary usage, in the case of special requirements, take appropriate safety precautions.

The information herein is only provisional and it does not represent a guarantee of the properties of the product.