

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: MP-1

1. CHEMICAL AND MANUFACTURER INFORMATION

1-1 Chemical Name : Petroleum synthetic hydrocarbon oil and increase sticky agent

1-2 Supplier information

Company name : Kyocera Corporation

Address : 6 Takeda Tobadono-Cho,Fushimi-Ku Kyoto 612-8501

Division : Corporate Cutting Tool Group

Phone No. : +81-75-604-3651 Fax No.: +81-75-604-3472

Emergency Contact: Sendai Quality Assurance Section (Sendai Plant) Phone No.: +81-996-23-4116

1-3 Manufacturer information

Company name : Sealend Co.,Ltd.

Address : 10-7 Ikegami 7-chome Ota-Ku Tokyo 146-0082

Division : Quality management division

Phone No. : +81-3-3753-1113 Fax No.: +81-3-3751-2991

Emergency Contact: Sealend Co.,Ltd. Phone No.: +81-3-3753-1113

1-4 Recommended use and Restriction on use:

This product is applied onto the thread portion to fix the tip of a cutting tool, mainly,
for metal materials.

2. HAZARDS IDENTIFICATION

2-1 GHS Classification

Physical-chemical hazard: Out of classification

Health hazard: Toxicity for a target internal organ/toxicity for the whole body(single exposure)
:Class 3

Environmental Impact: Classification is impossible.

The items that are not indicated above are out of classification or cannot be classified.

2-2 Label element

Pictorial indication or symbol



Word to provoke attention: Warning

2-3 Hazard/toxicity information

(Stimulant to the airway) There is a possibility of stimulus to the respiratory organ.

3. COMPOSITION/INGREDIENTS/IDENTIFY INFORMATION

Single product/mixture classification: Mixture

Chemical name: Petroleum synthetic hydrocarbon oil and increase sticky agent

Ingredients and Contents: Synthetic Lubricant Base oil 59%
Increase sticky agent (silica) 3%
Lubricating additive (molybdenum disulfide) 38%

Chemical expression and CAS No.: none

United Nations classification and United Nations number: not applicable

4. EMERGENCY AND FIRST AID PROCEDURES

When the product enters the eye: Wash the eye with fresh water and then receive medical treatment.

When the product sticks on the skin: Wash the skin carefully with liquid soap.

When the product is inhaled: Move the patient to a fresh air place and receive medical treatment if necessary.

When the product is swallowed: Do not cause the patient to vomit it. Receive medical treatment immediately.

5. FIRE AND EXPLOSION HAZARD DATA

Fire extinguishing method: Block off the burning source for the fire source and extinguish fire with an extinguishing agent.

Cool the peripheral tank or building with a water spray to prevent the spread of fire. The water spray is also used to diffuse the generated gas and protect the person engaged in extinguishing work.

To suppress the inhalation of generated gas and burning product, perform extinguishing work from the windward and put on a breathing type respiratory unit as required in a closed space or poor-ventilated place.

Fire extinguishing agent: Mist type extinguishing liquid, foam, powder, or carbonic acid gas.

6. SPILL OR LEAK PROCEDURES

Remove the peripheral ignition source.

For a small quantity: Wipe off the product with sand or a waste cloth and collect it into an empty vessel. Then, wipe it off completely with a waste cloth.

For a large quantity: Keep off by stretching a rope around the leakage place. After securing safety, collect the product into an empty vessel as much as possible.

Take care not to discharge the oil into a river or drainage.

7. PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

- Avoid the contact with a flame, spark or high-temperature matter so as not to generate vapor carelessly.
- Handle the product at a normal temperature and take care not to mix water or foreign substances.
- For equipment in which static electricity may occur, install a device to remove accumulated static electricity.
- The vapor generated from a petroleum product tends to stay because it is heavier than the air. For this reason, be careful about ventilation and fire.
- Store the product in a dark and cool place. Close the vessel tightly with a cover.

8. SPECIAL PROTECTION INFORMATION

Control concentration: Not specified

Allowable concentration: Not specified

Measure for equipment: In case of mist generation, close the generating source completely or install a local exhaust device.

Personal protector: Protector for breathing and protective glasses.... Not required usually.

Protective gloves ... When handling the product for a long time or getting wet, put on oil-proof gloves.

Protective clothes ... When handling the product for a long time or getting wet, put on oil-proof long sleeve working clothes.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Black semi-solid

Volatility: None

Specific gravity: 1.33

Melting point: 100°C or higher

Solubility: Low soluble into water

Flash point: 200°C or higher

Fire point: 300°C

Explosion limit (oil mist density): Lower limit: 0.9 vol%, Higher limit: 7 vol%

10. STABILITY AND REACTIVITY

Stability: Stable in the normal operating conditions.

Conditions to be avoided: No special example that has been reported

Uncongenial substance (mixing/melting inhibit substance):

Hydrogen peroxide... The product reacts positively.

Oxidizing agent (strong)... Firing or explosion may occur.

Potassium nitrate... An explosive mixture will be produced.

Hazardous substance resulting from decomposition:

From a substance from pyrolysis, toxic and hazardous gas such as carbon disulfide and carbon monoxide may be emitted.

Polymerization degree: There is no example of polymerization in a normal temperature and pressure.

1 1. HEALTH HAZARD DATA

As molybdenum disulfide

Acute toxicity (through the mouth): Out of classification Rat LD₅₀ 27 g/kg (lubricant base oil)

Skin corrosion/Irritation: No data available

Serious eye damage/Irritation: No data available

Respiratory or skin sensitization: No data available

Germ cell mutagenicity: No data available

Carcinogenicity: No data available

Toxicity to the genital organ: No data available

Toxicity for specific target organ/whole-body (single exposure):

There is no data as molybdenum disulfide. However, as molybdenum compound, it is described in the CERH Hazard Data Collection (2002) that high-density coarse particles may stimulate the upper airway. This product is classified as Division 3 (stimulative to the airway).

Toxicity for specific target organ/whole body (repeated exposure): No data available

Hazard for the aspiration type respiratory organ: No data available

1 2. ECOLOGICAL INFORMATION

Hazard to the aquatic environment: No data available

Resolvability: Not checked

Toxicity to fishes: Not checked

Others: Not checked

1 3. WASTE DISPOSAL PRECAUTIONS

- It is prohibited to throw away the product.
- When throwing away the product as waste, the related laws and regulations and local government standards should be observed.
- When the waste disposal is performed by industrial waste disposal company approved by urban or rural governor, or by local public organ, entrust it with the product for disposal.
- When burning the product, it should be performed in a safe place by using a proper method that is free from injury or damage. Set a lookout for it.

1 4. TRANSPORT PRECAUTIONS

The product should be carried without giving remarkable friction or vibration.

15. APPLICABLE LAW

Fire Services Act: Non-hazardous substance (This product comes under Solid in the Fire Services Act and its flash point is 40°C or higher.)

Hazardous substance ships and storage rule: Non-hazardous substance
As molybdenum disulfide

CAS No.1317-33-5

Chemical substance management promotion law (PRTR law)

Molybdenum and other compounds (molybdenum disulfide)

class 1 chemical substance No.453

Labor, Safety, Hygiene Law: Substance whose name must be notified (Enforcement Ordinance, Clause 18, 2) 603

Applicable range \geq 1%

Official Announce No. in the official gazette (Chemical Examination Law): 1-0481

16. OTHER INFORMATION

Reference literature

The Chemical Daily Co., Ltd.: 1530S Chemical Products

International Chemical Substance Safety Card (ICSC), Japanese Edition

Collection of Laws and Regulations on Chemical Products

Seizando Shoten Co., Ltd.: Rules on Hazardous Substance Sea Transportation and Storage,
and Related Notifications (Ministry of Transport, Maritime
Technology and Safety Bureau)

Independent Administrative Agency, Product Assessment Technology Infrastructure
Organization, HGS Classification Manual (edited on February 10, 2006)

Raw Material Manufacturers: Product Safety Data Sheet

The contents described in this Data Sheet are based on the reference materials and information that are now available, and subject to change according to new knowledge. The numeric values of content, physical/chemical properties, etc. are not guaranteed ones. The assessment of hazard and toxicity is not always perfect. Accordingly, take extreme care in handling this product.