SAFETY DATA SHEET [GHS]

1. IDENTIFICATION OF THE PRODUCT AND THE COMPANY

PRODUCT IDENTIFICATION
Product Name: Lubrication/seizure prevention agent
Product Use: Heat radiation and Lubrication coating agent (metal surface coat film forming agent)

COMPANY IDENTIFICATION
Manufacturer: Press and Mold Maintenance Parts Division, MISUMI Die & Mold Business
Company, MISUMI Corporation
Address: Iidabashi First Bldg., 5-1, Koraku 2-chome, Bunkyo-ku, Tokyo 112–8583, Japan
Business Phone: +81-3-5805-7145
Facsimile: +81-3-5805-7191

2. HAZARDS IDENTIFICATION

Pictogram

Signal word: Danger

Hazard Statements
- Harmful if swallowed
- Serious medicine wound, eye injury
- Serious eye injury
- Skin irritation

Precautionary statement
1. Don’t deal with it until reads and understands all the safe cautions.
2. Don’t remove to other containers.
3. In order to prevent substance damage, absorb with an absorber what was distilled.
4. Wear a protective glove / protective glasses / protection face / protective cloth.
5. After handling should wash a hand well.
6. Don’t inhale a particulate / gas / mist / steam / spray.
7. When you use this product, don’t carry out eating and drinking or smoking.
8. Remove the polluted clothing, and when you re-use it, wash.

Emergency Measures
- If it goes into eyes, will be careful for more than 15 minutes with running water, rinse, and receive an ophthalmologist’s allowance.
- If swallowed, call a physician immediately.
- When you adhere to the skin, wash out with soap and much water. Receive a doctor’s allowance, if abnormal.

Storage
Keep it in a container with corrosiveness-proof / corrosiveness-proof lining.
Avoid humidity, make a container airtight and keep at the well ventilated place.

Disposal
Content should be used up before disposal of container.
Dispose of a container/content in accordance with a local, regional, and a national regulations.

PHYSICAL/CHEMICAL HAZARD

<table>
<thead>
<tr>
<th>Classification categories</th>
<th>Explosives</th>
<th>Flammable gases</th>
<th>Flammable aerosols</th>
<th>Oxidizing gases</th>
<th>Gases under pressure</th>
<th>Flammable liquids</th>
<th>Flammable solids</th>
<th>Self-reactive substances</th>
<th>Pyrophoric liquids</th>
<th>Pyrophoric solids</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not categorized</td>
<td>Not categorized</td>
<td>Not categorized</td>
<td>Not categorized</td>
<td>Not categorized</td>
<td>Not categorized</td>
<td>Not categorized</td>
<td>Not categorized</td>
<td>Not categorized</td>
<td>Not categorized</td>
<td>Not categorized</td>
</tr>
</tbody>
</table>
3. COMPOSITION and INFORMATION ON INGREDIENTS

Distinction of single substance or mixture: Mixture

Hazardous ingredients and concentration

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Content(%)</th>
<th>CAS No.</th>
<th>EINECS No.</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compound alkali silicate</td>
<td>13-15</td>
<td>Non-disclosure</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Boron nitride</td>
<td>16-17</td>
<td>10043–11–5</td>
<td>233–136–6</td>
<td></td>
</tr>
<tr>
<td>Ceramic color (Co, Sb)</td>
<td>2</td>
<td>Non-disclosure</td>
<td>–</td>
<td></td>
</tr>
</tbody>
</table>

4. FIRST-AID MEASURES

Eye Contact

Running water washes for at least 15 minutes immediately.
A finger opens an eyelid well and it makes it water spread well to all the corners of an eyeball and an eyelid in the case of eyewashing.
A contact lens is immediately removed, unless it adheres.
When a irritation continue, undergo an ophthalmologist’s medical treatment immediately.

Skin Contact

Wash well with soap and water after failing to pass with water the portion which touched the product.
Change should be looked at by appearance or feel a pain for it, and when itchiness comes out, receive a doctor’s diagnosis immediately.

Inhalation

Make it move to the place of fresh air immediately.
It is kept warm by loosening clothes and make it quiet.
When sick, a doctor’s diagnosis is received promptly.
Ingestion
Washing the inside of a mouth with water, and the water/milk of 1-2 cups are given, and vomit out the content in the stomach.
When sick, receive a doctor’s disposal immediately.
When disaster victims do not have consciousness, don’t give nothing from a mouth.

Expected acute symptom and late symptom: Skin irritancy, strong eye irritancy
The most important symptom: With no special affairs
Protection of those who perform emergency correspondence:
Avoid contact with skin. Wear protective gloves, eye/face protection and long sleeved clothes if necessary.
Special notes to in medical treatment: Without report information

5. FIRE-FIGHTING MEASURES
Extinguishing Media
This product is non-inflammable
Extinguishing media that do not use it
No information
Fire Fighting Procedures
This product is non-inflammable
Peculiarity danger / hazardous property
No information
Special protective equipment for fire-extinguishing workers
No information

6. ACCIDENTAL RELEASE MEASURES
Personal precautions
・Avoid contact with skin. Wear appropriate protective equipment (protective gloves, eye/face protection, apron and long sleeved clothes) when handling spill of this product.
・People are evacuated from a dangerous area. A rope is stretched around a dangerous area and entry of people is forbidden.
Protective equipment
Protective gloves, eye/face protection, apron and long sleeved clothes.
Emergency procedures
When a fire breaks out, cope with it according to the items mentioned of Section-5.
Environmental precautions
・Avoid that a leakage thing with high concentration carries out direct runoff to a river or a sewer.
Containment, the purification method, and material of a leakage thing
・Eliminate all ignition sources such as heat, sparks, open flames and combustible materials.
・The suitable fire extinguisher for fire extinguishing is prepared.
・Falls in small quantities:
   After making dry sand, sawdust, Wes, etc. absorb, it collects in the container which can be sealed.
   About a recovery impossible part, it washes away with a lot of water.
・When an abundant outflow is carried out:
   Enclose with banking etc., prevent an outflow, and collect after leading to a safe place.
   Wear protective equipment, and the collected leakage thing is put into an airtight container,
   and move a container to a safe place.
Other Information
Dispose contaminant and waste in accordance with regulations relative to disposal.
7. HANDLING AND STORAGE

Cautions on Handling :
・ It is harmful, if touch the skin directly, it goes into an eye or it inhales.
・ Avoid contact with skin. Wear protective gloves, eye/face protection and long sleeved clothes if necessary.
・ Avoid that a worker inhales vapor / gas / mist / dust by ventilating a workplace place.
・ After use, wash hands and gurgles mouth thoroughly.

Caution on Storage :
・ Keep container tightly closed.
・ Store ventilated indoor place.
・ Keep reach out of children.
・ Don’t supposed to keep with a food and feed.

8. EXPOSURE CONTROLS. PERSONAL PROTECTION

Facilities recommendation :
・ Do not locate heat/flame generating facilities to the work area.
・ Install the equipment for eyewashing and body washing near the workplace place.

Protective equipments :
| Respiratory protection | Wear dust preventive mask. Wear self-contained breathing apparatus in case of operation in closed areas. |
| Eye/face protection     | Wear goggles type of eye protection or the whole face surface protection shield. |
| Skin protection         | Wear appropriate gloves and clothes which are impervious to chemicals. |
| Other protection        | The apron and safety shoes which were specified if needed are worn. |

Threshold Limit of Ingredient
It isn’t established.

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>ACGIH(TLVs-TWA)</th>
<th>JOHSC</th>
<th>other</th>
</tr>
</thead>
</table>

JOHSC : Japan Occupational Health Service Centre

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Greenish yellow slurry</th>
<th>Solubility</th>
<th>Easy. Water dilution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor</td>
<td>No odor</td>
<td>Explosion limits</td>
<td>Does not correspond</td>
</tr>
<tr>
<td>Boiling point</td>
<td>100–120°C</td>
<td>Vapor pressure</td>
<td>No data</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data</td>
<td>Vapor density</td>
<td>No data</td>
</tr>
<tr>
<td>Density</td>
<td>1.3</td>
<td>Ignition point</td>
<td>Does not correspond</td>
</tr>
<tr>
<td>Viscosity</td>
<td>20–30 Pa•s</td>
<td>Decomposition temp.</td>
<td>No data</td>
</tr>
<tr>
<td>pH</td>
<td>11–11.5</td>
<td>Flammability</td>
<td>Nonflammable</td>
</tr>
<tr>
<td>Flash point</td>
<td>Does not correspond</td>
<td>Other</td>
<td>Especially nothing</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th></th>
<th>Stable under the usual handling conditions. Nonflammability.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chemical stability</strong></td>
<td>ESPECIALLY NOTHING</td>
</tr>
<tr>
<td><strong>Hazardous reactions</strong></td>
<td>ESPECIALLY NOTHING</td>
</tr>
<tr>
<td><strong>Condition to avoid</strong></td>
<td>Don’t supposed to do while lifting a container lid.</td>
</tr>
<tr>
<td><strong>Incompatible materials</strong></td>
<td>Don’t make them touch amphoteric metal by which aluminum, tin, zinc, lead, etc. Don’t supposed to add a high concentration acid.</td>
</tr>
<tr>
<td><strong>Hazardous decomposition products</strong></td>
<td>NO INFORMATION</td>
</tr>
<tr>
<td><strong>Reactivity</strong></td>
<td>Stable on the usual handling conditions</td>
</tr>
</tbody>
</table>

11. TOXICOLOGICAL INFORMATION

**Health hazard information on ingredient**: There is no data of this product, so information about No. 1 sodium silicate’s data is indicated.

**The likely routes of exposure**: Skin contact, Mist contacts an eye.

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Oral LD$_{50}$ (mg/kg (rat))</th>
<th>Dermal</th>
<th>Inhalation (gas/mist)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium silicate</td>
<td>1,280</td>
<td>No information</td>
<td>No information</td>
</tr>
<tr>
<td>Boron Nitride</td>
<td>3,150</td>
<td>No data</td>
<td>No data</td>
</tr>
</tbody>
</table>

**Acute toxicity (LD$_{50}$, LC$_{50}$, etc.)**

- **Skin corrosion/irritation**: It is the classification 1B (U.N. GHS classification) by a film barrier test result (in vitro).
- **Serious damage/irritation to eyes**: Classification 1
- **Respiratory sensitization**: Cannot classify (no data)
- **Skin sensitization**: Cannot classify (no data)

**Symptoms related to the physical, chemical and toxicological characteristics**

- **Reproductive toxicity**: Cannot classify (no data)
- **Specific target organ (Single exposure)**: Cannot classify (with no information)
- **Specific target organ (Repeat exposure)**: Cannot classify (with no information)
- **Toxicity to respiratory organs**: Cannot classify (no data)
- **Germ cell mutagenicity**: Cannot classify (no data)
- **Carcinogenicity**: Cannot classify (no data)

**Delayed and immediate effects and also chronic effects from short- and long-term exposure**

- **No information**

**Other Information**: No information

12. ECOLOGICAL INFORMATION

**Ecotoxicity (Acute)**

- Cannot classify (no data)

**Ecotoxicity (Chronic)**

- Cannot classify (no data)

**Resistence and degradability**

- No data

**Bioaccumulative potential**

- No data

**Mobility in soil**

- Although there is no data, it is thought that it moves to a water area from physicochemical properties.

**Other adverse effects**

- The ingredient is not listed by the appendix of the Montreal Protocol.
13. DISPOSAL CONSIDERATION

- Content should be used up before disposal of container.
- Container/content should be disposed in accordance with local, regional and national regulations.
- It is neutralized with hydrochloric acid, sulfuric acid after the dilution with water and separates the sediment by filtration. (I handle it as incombustibles)
- When entrusting processing of waste, after notifying of danger and hazardous property enough, processing is entrusted to a processing contractor etc.

14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>International rule :</th>
<th>IMDG/IMO</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN Number</td>
<td>3266</td>
</tr>
<tr>
<td>UN Proper shipping name</td>
<td>CORROSIVE LIQUID. N.O.S</td>
</tr>
<tr>
<td>Transport hazard class</td>
<td>8</td>
</tr>
<tr>
<td>Packing group</td>
<td>III</td>
</tr>
<tr>
<td>Marine pollutant</td>
<td>Un-corresponding</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ICAO/IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN Number</td>
</tr>
<tr>
<td>UN Proper shipping name</td>
</tr>
<tr>
<td>Transport hazard class</td>
</tr>
<tr>
<td>Packing group</td>
</tr>
</tbody>
</table>

General information: Follow the cautions command stated to Section-7 “cautions on handling and storage.”

Ground transportation: Comply stipulations of appropriate ground transportation regulations.

Marine transportation: Comply stipulations of appropriate maritime regulations.

Air transportation: Comply stipulations of appropriate air transportation regulations.

15. REGULATORY INFORMATION

| Industrial Safety and Health Law (Japan) | Does not correspond |
| Originance on Prevention of Organic Solvent Poisoning | Does not correspond |
| Pollutant Release and Transfer Register | Does not correspond |
| Poisonous and Deleterious Substances Control Law | Does not correspond |
| Fire Service Law (Japan) | Does not correspond |
| Ship Safety Law (Japan) | Other corrosive substances |
| Aviation Law | Other corrosive substances |
**16. OTHER INFORMATION**

**Preparation and revision date of SDS:** JUN 26, 2020

**References:**
1. Safety Data Sheet of the raw materials maker
2. “16514 chemistry goods” Chemical Daily
3. The “Sachs toxic substance databook” Maruzen
4. “Chemical substance Occupational Safety and Health regulation manual”

1. Although We are creating written contents based on data, information, data, etc. which have been obtained at present, they do not guarantee the perfection of information, and correctness. Moreover, it may be revised by the newly acquired knowledge.
2. It may be unable to predict to the hazardous property of a chemical substance. In users’ responsibility, the handling should pay careful attention and please deal with it.
3. Do not especially use it for a medical use.