



**Kemgard® 911B**

**Japan-JIS Z 7253:2019  
Occupational Safety and Health Act  
GHS (Globally Harmonized System)**

**Issue Date** 01/Jan/2024  
**Print Date** 13/Dec/2023

**Revision Number** 1.5  
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**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Name:** Kemgard® 911B

**Pure substance/mixture** Mixture

**Zinc Oxide**  
**CAS Number** 1314-13-2  
**Weight-%** >25

**Zinc Molybdenum Oxide**  
**CAS Number** 22914-58-5  
61583-60-6  
**Weight-%** >25

**Recommended Use** Flame retardant Smoke suppressant

**Uses advised against** None known

**Company:** J.M. Huber Corporation  
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**2. HAZARD IDENTIFICATION**

**Japan GHS Classification**

**Physical Hazards** Not classified

**Health Hazard** Acute toxicity - Inhalation Category 4  
Specific target organ toxicity (STOT) - repeated exposure, category 2

**Environmental Hazards** Acute Aquatic Toxicity: Category 1  
Chronic Aquatic Toxicity: Category 1

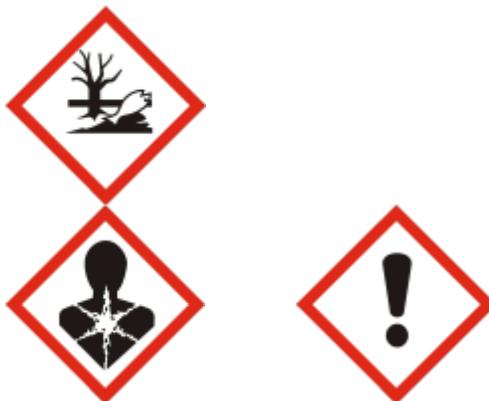
**GHS label elements**  
**Symbols/Pictograms**

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**Signal Word**

Warning

**Hazard statements**

H332 - Harmful if inhaled  
H373 - May cause damage to organs through prolonged or repeated exposure  
H400 - Very toxic to aquatic life  
H410 - Very toxic to aquatic life with long lasting effects

**Precautionary Statements**

**Prevention**

P202 - Do not handle until all safety precautions have been read and understood  
P260 - Do not breathe dust  
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
P271 - Use only outdoors or in a well-ventilated area  
P273 - Avoid release to the environment

**Response**

P317 - Get emergency medical help.  
P319 - Get medical help if you feel unwell.  
P391 - Collect spillage  
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water [or shower]  
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

**Storage**

P402 - Store in a dry place

**Disposal**

P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture

Mixture

| Chemical Name         | CAS Number               | Japan GHS Classification  | Weight-% |
|-----------------------|--------------------------|---|----------|
| Zinc Oxide            | 1314-13-2                | Acute Aquatic Toxicity: Category 1<br>Chronic Aquatic Toxicity:<br>Category 1 | >25      |
| Zinc Molybdenum Oxide | 22914-58-5<br>61583-60-6 | Acute Tox. 4, H332<br>STOT RE 2, H373   | >25      |

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|  |  |  |  |
|--|--|--|--|
|  |  | Aquatic Acute 1, H400<br>Aquatic Chronic 2, H411 |  |
|--|--|--|--|

## 4. FIRST AID MEASURES

**If inhaled:** Remove victim to fresh air and keep at rest in a position comfortable for breathing

**IF ON SKIN:** Wash with plenty of soap and water  
Take off contaminated clothing and wash before reuse

**IF IN EYES:** In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes  
Call a physician if irritation develops and persists

**If swallowed:** Rinse mouth thoroughly with water

**Self-Protection of the First Aider** Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves

**Notes to Physician** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media** Water spray (fog)  
Dry chemical  
Carbon dioxide (CO2)  
Foam

**Unsuitable Extinguishing Media** Do not use water jetstream

**Special hazards arising from the substance or mixture** Avoid dust formation

**Fire-fighting measures** In case of fire and/or explosion do not breathe fumes

**Special Protective Equipment for Firefighters** Wear self-contained breathing apparatus and protective suit

## 6. ACCIDENTAL RELEASE MEASURES

**Protective Equipment and Precautions for Firefighters** Avoid dust formation  
Ensure adequate ventilation  
Use personal protection recommended in Section 8  
Avoid contact with eyes and skin. Wear suitable personal protection equipment.  
Keep unauthorized personnel away

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|   |   |
|---|---|
| <b>Environmental Precautions</b>                            | Keep out of drains, sewers, ditches and waterways<br>Disposal considerations<br>See section 13 for more information   |
| <b>Methods and material for containment and cleaning up</b> | Large Spill: Do not dry sweep dust. Wet dust with water before sweeping or use a vacuum to collect dust<br>Small Spill: Vacuum or sweep material and place in a disposal container Minimize use of water during clean-up<br>Recommended filter type: High efficiency particulate air filter (HEPA filter) |
| <b>Other Information</b>                                    | Not applicable  |

## 7. HANDLING AND STORAGE

### Handling

**Technical measures** Provide adequate ventilation as well as local exhaust at critical locations  
Ensure adequate ventilation  
Use personal protection equipment  
See section 8 for more information

**Advice on safe handling** Minimize dust generation and accumulation

**Conditions for safe storage, including any incompatibilities** Keep containers tightly closed in a cool, well-ventilated place

**Hygiene Measures** Wash hands thoroughly after handling

### Storage

**Packaging compatibilities** Keep/store only in original container

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Limits** Provide adequate ventilation as well as local exhaust at critical locations

### Zinc Oxide

Japan TWA: 4 mg/m<sup>3</sup> (total dust)  
1 mg/m<sup>3</sup> (respirable dust)

### Zinc Molybdenum Oxide

Japan Not established

**Engineering Measures** Ensure adequate ventilation, especially in confined areas

### Personal Protective Equipment

**Respiratory Protection** In case of inadequate ventilation wear respiratory protection

**Hand protection** For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn

**Eye Protection** Wear safety glasses with side shields (or goggles)

**Skin and Body Protection** Wear suitable protective clothing.  
Chemical resistant apron.

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## Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice  
Wash thoroughly after handling  
Avoid contact with eyes and skin  
Do not breathe dust

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                      |   |
|--------------------------------------|---|
| <b>Physical State</b>                | Solid, Powder                                   |
| <b>Color</b>                         | White   |
| <b>Odor</b>                          | Odorless  |
| <b>Odor Threshold</b>                | No information available                        |
| <b>Melting Point / Melting Range</b> | No information available                        |
| <b>Boiling Point</b>                 | No information available                        |
| <b>Freezing Point</b>                | No information available                        |
| <b>Autoignition Temperature</b>      | No data available                               |
| <b>Evaporation Rate</b>              | Not applicable                                  |
| <b>Flammability (solid, gas)</b>     | No data available                               |
| <b>Explosive Properties</b>          | No data available                               |
| <b>Vapor Pressure</b>                | No data available                               |
| <b>Water Solubility</b>              | Slightly soluble                                |
| <b>Partition coefficient</b>         | No data available                               |
| <b>Viscosity</b>                     | No information available                        |
| <b>Specific Gravity</b>              | No data available                               |
| <b>Oxidizing Properties</b>          | No data available                               |
| <b>Decomposition Temperature</b>     | No information available                        |
| <b>Flash Point</b>                   | Not applicable. Product/Substance is inorganic. |
| <b>pH:</b>                           | 6.5 5% Water suspension                         |
| <b>Initial boiling point</b>         | No information available                        |
| <b>Flammability (solid, gas)</b>     | Non-combustible Not applicable                  |
| <b>Vapor Density</b>                 | No data available                               |
| <b>Relative Density</b>              | 5.1   |
| <b>Solubility in other solvents</b>  | No information available                        |
| <b>VOC Content (%)</b>               | Not applicable                                  |

## 10. STABILITY AND REACTIVITY

|   |                                |
|---|--------------------------------|
| <b>Reactivity</b>                         | Stable under normal conditions |
| <b>Chemical stability</b>                 | Stable under normal conditions |
| <b>Possibility of hazardous reactions</b> | None known                     |
| <b>Conditions to avoid</b>                | Strong oxidizing agents        |
| <b>Incompatible materials</b>             | Strong oxidizing agents        |
| <b>Hazardous decomposition products</b>   | None known                     |

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## 11. TOXICOLOGICAL INFORMATION

**General Information** Users are advised to consider national Occupational Exposure Limits or other equivalent values.

### Information on Likely Routes of Exposure

|   |  |
|---|--|
| <b>Inhalation</b>   | May cause respiratory tract irritation                       |
| <b>Skin</b>   | No known hazard in contact with skin                         |
| <b>Eyes</b>   | Dust contact with the eyes can lead to mechanical irritation |
| <b>Ingestion</b>  | Ingestion is not a likely route of exposure                  |
| <b>Symptoms related to the physical, chemical and toxicological characteristics</b> | Dust may cause mechanical irritation to eyes.                |

### 11.1. Information on toxicological effects

#### Zinc Oxide

Oral LD50 7950 mg/kg Rat

#### Zinc Molybdenum Oxide

Oral LD50 >10000 mg/kg Rat

IARC Not Listed

**Specific target organ toxicity - Repeated exposure** Kidney (based on tubular degeneration/regeneration of male Han Wistar rats at 125 mg/kg/day). NOAEL – 60 mg/kg Rat; Oral; 90-day.

|   |  |
|---|--|
| <b>Acute Toxicity</b>                                     | Low hazard for usual industrial or commercial handling   |
| <b>Serious eye damage/eye irritation</b>                  | Dust may cause mechanical irritation to eyes   |
| <b>Respiratory Sensitization</b>                          | Does not cause sensitization   |
| <b>Skin Corrosion/Irritation</b>                          | Contact with dust can cause mechanical irritation or drying of the skin                                |
| <b>Skin Sensitization</b>                                 | Not a skin sensitizer  |
| <b>Germ cell mutagenicity</b>                             | No data available.   |
| <b>Reproductive Effects</b>                               | This product does not contain any known or suspected reproductive hazards.                             |
| <b>Carcinogenicity</b>                                    | This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP. |
| <b>Target Organ Effects</b>                               | Skin. Eyes. Respiratory system.  |
| <b>Specific target organ toxicity - Single exposure</b>   | No data available.   |
| <b>Specific target organ toxicity - Repeated exposure</b> | May cause damage to organs through prolonged or repeated exposure if inhaled. Kidney.                  |

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## 12. ECOLOGICAL INFORMATION

|                                      |  |
|--------------------------------------|--|
| <b>Ecotoxicity</b>                   | Very toxic to aquatic life with long lasting effects |
| <b>Persistence and degradability</b> | No data available                                    |
| <b>Bioaccumulation</b>               | No data available.                                   |
| <b>Mobility in soil</b>              | No data available                                    |
| <b>Hazardous to the ozone layer</b>  | No data available                                    |

## 13. DISPOSAL CONSIDERATIONS

|                               |   |
|-------------------------------|---|
| <b>Disposal</b>               | Dispose of in accordance with federal, state and local regulations                            |
| <b>Contaminated packaging</b> | Empty containers should be taken to an approved waste handling site for recycling or disposal |

## 14. TRANSPORT INFORMATION

### Mode of Transportation (Road, Water, Air, Rail)

|                 |   |
|-----------------|---|
| <b>ADR</b>      | UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc Oxide, Zinc Molybdate) |
| <b>ADN</b>      | UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc Oxide, Zinc Molybdate) |
| <b>IATA</b>     | UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc Oxide, Zinc Molybdate) |
| <b>IMDG/IMO</b> | UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc Oxide, Zinc Molybdate) |
| <b>ICAO</b>     | UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc Oxide, Zinc Molybdate) |

|   |   |
|---|---|
| <b>14.1. UN number</b>                    | UN3077  |
| <b>14.2. UN proper shipping name</b>      | UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc Oxide, Zinc Molybdate) |
| <b>14.3. Transport hazard class(es)</b>   | 9   |
| <b>Subsidiary Risk</b>                    | -   |
| <b>14.4. Packing group</b>                | III   |
| <b>14.5. Environmental hazards</b>        | Marine Pollutant  |
| <b>14.6. Special precautions for user</b> | Do not handle until all safety precautions have been read and understood.               |

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## 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable



Marine Pollutant



## 15. REGULATORY INFORMATION

### Global Inventories

Pure substance/mixture

Mixture

| Chemical Name         | CAS Number               | EC No     | EU REACH registration number  | Australia (AIC) | Canada (DSL) | China (IECSC) | Japan                                | S. Korea (KECL) | Mexico | New Zealand | Philippines (PICCS) | Taiwan | TSCA: United States |
|-----------------------|--------------------------|-----------|-------------------------------|-----------------|--------------|---------------|--------------------------------------|-----------------|--------|-------------|---------------------|--------|---------------------|
| Zinc Oxide            | 1314-13-2                | 215-222-5 | 01-211946<br>3881-32          | Y               | Y            | Y             | ENCS:<br>(1)-561<br>ISHL:<br>(1)-561 | KE-35565        | Y      | Y           | Y                   | Y      | A                   |
| Zinc Molybdenum Oxide | 22914-58-5<br>61583-60-6 | 245-322-4 | 01-212080<br>0481-68-0<br>000 | N               | Y            | Y             | (1)-781<br>(ENCS)(ISHL)              | KE-11910        | N      | N           | N                   | Y      | A                   |

X / Y: Complies ; A: Active ; - / N: Exempt / Not Listed

### Legend-Inventories

KECL - Korean Existing and Evaluated Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

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PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

TSCA (Toxic Substances Control Act)

DSL (Domestic Substance List)

NDSL (Non-Domestic Substances List)

Japan - ISHL Notifiable Substances

ENCS - Japan Existing and New Chemical Substances

**Zinc Molybdenum Oxide**

Japanese Pollutant Release and Transfer Register - Class 1 Substance :453 &gt;= 1.0%

## 16. OTHER INFORMATION

|                                   |   |
|-----------------------------------|---|
| <b>Prepared by</b>                | Huber Engineered Materials Global Regulatory Affairs<br>email: regulatory.affairs@huber.com   |
| <b>Reason for Revision</b>        | This SDS complies with the requirements of JIS Z 7250:2010 and JIS Z 7252:2009 (Japan)  |
| <b>Bibliography</b>               | NITE GHS Classified list<br>Japan Society for occupational health (2015) recommendation of allowable concentrations, etc.<br>ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value   |
| <b>Abbreviations and acronyms</b> | IARC (International Agency for Research on Cancer)<br>IATA (International Air Transport Association)<br>IMDG (International Maritime Dangerous Goods)<br>IUCLID (International Uniform Chemical Information Database)<br>WHMIS (Workplace Hazardous Materials Information System)<br>DOT (Department of Transportation)<br>OSHA (Occupational Safety and Health Administration of the US Department of Labor)<br>TWA (Time-Weighted Average)<br>CLP (The Classification, Labeling and Packaging of Substances and Mixtures Regulation (EC 1272/2008))<br>PPE (Personal Protection Equipment)<br>NIOSH (National Institute for Occupational Safety and Health)<br>TDG (Transport of Dangerous Goods) Canada<br>CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)<br>RQ (Reportable Quantity) (RQ/% in mixture)<br>STEL (Short Term Exposure Limit)<br>TLV® (Threshold Limit Value)<br>DNEL (Derived No Effect Level)<br>SVHC (Substances of Very High Concern)<br>BOD (Biochemical oxygen demand)<br>COD (Chemical oxygen demand)<br>ICAO (International Civil Aviation Organization)<br>IMDG (International Maritime Dangerous Goods)<br>ADR (European Agreement Concerning the International Carriage of Dangerous Goods by Road)<br>RID (Agreement Concerning the International Carriage of Dangerous Goods by Rail)<br>SCBA (Self-Contained Breathing Apparatus) Positive Pressure<br>PNEC (Predicted No Effect Concentration)<br>GHS (Globally Harmonized System)<br>TSCA (Toxic Substances Control Act) |
| <b>Disclaimer</b>                 | The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text   |

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