



# Safety Data Sheet

FIRE RETARDANT ADDITIVES

Malaysia CLASS Regulation, 2013  
Globally Harmonized System (GHS)

Issue Date: 28/Feb/2021  
Print Date: 28/Feb/2021

Revision Number: 1.4.1

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

Product Name: Kemgard® 911B-LSA

Pure substance/mixture Mixture

#### Zinc Oxide

CAS Number 1314-13-2

Weight-% >25

#### Zinc Molybdenum

CAS Number 22914-58-5

Weight-% >25

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Flame retardant Smoke suppressant

Uses advised against None known.

### 1.3. Details of the supplier of the safety data sheet

Company: J.M. Huber Corporation  
3100 Cumberland Boulevard, Suite 600  
Atlanta, GA 30339 USA  
Tel: +1 678 247-7300

Internet [www.hubermaterials.com](http://www.hubermaterials.com)

E-mail [hubermaterials@huber.com](mailto:hubermaterials@huber.com)

1.4. Emergency telephone number CHEMTREC: +1 800 424 9300 or International +1 703 527 3887

## 2. HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

GHS Classification

Hazards identification

Physical Hazard Not classified

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**Health Hazards**

Not classified

**Environmental Hazard**

Hazardous to the aquatic environment - Acute, category 1  
Hazardous to the aquatic environment - Chronic, category 1

**2.2. Label elements****Symbols/Pictograms****Signal Word**

Warning

**Hazard Statements**

Very toxic to aquatic life with long lasting effects

**Precautionary Statements****Prevention**

P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood  
P280 - Wear protective gloves/protective clothing and eye/face protection  
P260 - Do not breathe dust  
P264 - Wash hands thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P273 - Avoid release to the environment  
Employ good industrial hygiene practice

**Response**

P391 - Collect spillage  
P308 + P311 - IF exposed or concerned: Call a POISON CENTER or doctor  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water [or shower]

**Storage**

Store away from incompatible materials.

**Disposal**

P501 - Dispose of contents/ container to an approved waste disposal plant.

**2.3. Other hazards**

No information available.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Pure substance/mixture**

Mixture

| Chemical Name   | CAS Number | TSCA: United States | REACH registration number | Weight-% |
|-----------------|------------|---------------------|---------------------------|----------|
| Zinc Oxide      | 1314-13-2  | A                   | 01-2119463881-32          | >25      |
| Zinc Molybdenum | 22914-58-5 | A                   | 01-2120800481-68-0000     | >25      |

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

## 4. FIRST AID MEASURES

### 4.1. Description of first aid measures

|                                                                                        |                                                                                                                                                                                |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General Advice</b>                                                                  | When in doubt or if symptoms are observed, get medical advice. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. |
| <b>Eye Contact</b>                                                                     | In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.                                       |
| <b>Skin Contact</b>                                                                    | Wash with plenty of soap and water.                                                                                                                                            |
| <b>Ingestion</b>                                                                       | Rinse mouth thoroughly with water.                                                                                                                                             |
| <b>Inhalation</b>                                                                      | Do not breathe dust. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.                                           |
| <b>Aspiration hazard</b>                                                               | Based on available data, the classification criteria are not met.                                                                                                              |
| <b>Notes to Physician</b>                                                              | Treat symptomatically.                                                                                                                                                         |
| <b>4.2. Most important symptoms and effects, both acute and delayed</b>                | Inhalation of dust may cause irritation of the respiratory system. Eye irritation.                                                                                             |
| <b>4.3. Indication of any immediate medical attention and special treatment needed</b> | Treat symptomatically. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.        |

## 5. FIRE-FIGHTING MEASURES

### 5.1. Extinguishing media

#### **Suitable Extinguishing Media**

Use extinguishing agent suitable for type of surrounding fire. Water spray (fog). Dry chemical. Foam. Carbon dioxide (CO<sub>2</sub>).

#### **Unsuitable Extinguishing Media**

None known.

### 5.2. Special hazards arising from the substance or mixture

Non-combustible.

### 5.3. Advice for firefighters

#### **Special protective**

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**equipment for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing.

**Fire-fighting measures**

Water mist may be used to cool closed containers.

## 6. ACCIDENTAL RELEASE MEASURES

**6.1. Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid dust formation. Keep unauthorized personnel away.

**For non-emergency personnel** Keep unauthorized personnel away.

**For emergency responders** Keep unauthorized personnel away. Use personal protection recommended in Section 8.

**6.2. Environmental precautions** Avoid runoff to waterways and sewers.

**6.3. Methods and material for containment and cleaning up** Large Spill: Do not dry sweep dust. Wet dust with water before sweeping or use a vacuum to collect dust Small Spill: Vacuum or sweep material and place in a disposal container

**6.4. Reference to other sections** Section 8: Exposure controls and personal protection. See Section 13 for additional waste treatment information.

## 7. HANDLING AND STORAGE

**7.1. Precautions for safe handling**

Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment as required.

**7.2. Conditions for safe storage, including any incompatibilities** Keep container tightly closed and dry. Store away from incompatible materials.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1. Control parameters****Occupational exposure limits****Zinc Oxide**

Malaysia

NIOSH

TWA 3 mg/m<sup>3</sup> Fume and respirable dust  
Ceiling: 15 mg/m<sup>3</sup> (total dust)  
STEL: 10 mg/m<sup>3</sup> (fume)

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ACGIH TWA: 5 mg/m<sup>3</sup> (total dust)  
STEL: 10 mg/m<sup>3</sup> (respirable)  
OSHA TWA: 2 mg/m<sup>3</sup> (respirable)  
PEL: 15 mg/m<sup>3</sup> (total dust)  
5 mg/m<sup>3</sup> (respirable fraction)

**Zinc Molybdenum**

Malaysia TWA: 5 mg/m<sup>3</sup>  
NIOSH 8-hr TWA: 10 mg/m<sup>3</sup>  
ACGIH TWA: 10 mg/m<sup>3</sup> dust  
0.5 mg/m<sup>3</sup> Respirable fraction  
OSHA TWA: 5 mg/m<sup>3</sup> (respirable); 10 mg/m<sup>3</sup> (dust)  
PEL: 5 mg/m<sup>3</sup> (respirable)

**Biological Limit Values:** No information available

**Recommended monitoring procedures** Refer also to national guidance documents for information on currently recommended monitoring procedures

**8.2. Exposure controls**

**Engineering Measures** Do not handle until all safety precautions have been read and understood  
Ensure adequate ventilation, especially in confined areas  
Provide a good standard of controlled ventilation (10 to 15 air changes per hour)  
Use exhaust ventilation to keep airborne concentrations below exposure limits  
In case of insufficient ventilation, wear suitable respiratory equipment

**Personal protective equipment**

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

**Skin and Body Protection** Wear suitable protective clothing.

**Hand Protection** Wear suitable gloves.

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

**Thermal hazards** Wear suitable protective clothing.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use.

**Environmental Exposure Controls** Dispose of in accordance with local regulations. Do not empty into drains or water courses.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**9.1. Information on basic physical and chemical properties****Appearance:**

**Physical State** Solid Powder  
**Color** White

**Odor** Odorless

**Odor Threshold** No information available

**pH:** 6.5 5% Water suspension

**Melting Point / Melting Range** No information available

**Initial boiling point** No information available

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|                                     |                                                 |
|-------------------------------------|-------------------------------------------------|
| <b>Freezing Point</b>               | No information available                        |
| <b>Boiling Point</b>                | No information available                        |
| <b>Flash Point:</b>                 | Not applicable. Product/Substance is inorganic. |
| <b>Evaporation Rate</b>             | Not applicable.                                 |
| <b>Flammability (solid, gas)</b>    | Non-combustible                                 |
| <b>Upper flammability limit:</b>    | Not applicable                                  |
| <b>Lower flammability limit:</b>    | Not applicable                                  |
| <b>Vapor Pressure</b>               | No data available                               |
| <b>Vapor Density</b>                | No data available                               |
| <b>Relative Density</b>             | 5.1                                             |
| <b>Water Solubility</b>             | Slightly soluble                                |
| <b>Solubility in other solvents</b> | No information available                        |
| <b>Partition coefficient</b>        | No data available                               |
| <b>Autoignition Temperature</b>     | No data available                               |
| <b>Decomposition Temperature</b>    | No information available                        |
| <b>Viscosity</b>                    | No information available.                       |
| <b>VOC Content (%)</b>              | Not applicable                                  |

## 10. STABILITY AND REACTIVITY

|                                                 |                                       |
|-------------------------------------------------|---------------------------------------|
| <b>10.1. Reactivity</b>                         | Stable under normal conditions        |
| <b>10.2. Chemical stability</b>                 | Stable under normal conditions        |
| <b>10.3. Possibility of hazardous reactions</b> | None under normal processing          |
| <b>10.4. Conditions to avoid</b>                | Dust formation Incompatible materials |
| <b>10.5. Incompatible materials</b>             | Strong oxidizing agents               |
| <b>10.6. Hazardous decomposition products</b>   | None known                            |

## 11. TOXICOLOGICAL INFORMATION

|                            |                                                                                                 |
|----------------------------|-------------------------------------------------------------------------------------------------|
| <b>General Information</b> | 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   |

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|                                                                                     |                                                              |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------|
| <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

Oral LD50 >10000 mg/kg Rat

**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. Based on available data, the classification criteria are not met

|                                                           |                                                                                                        |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| <b>Acute Toxicity</b>                                     | Low hazard for usual industrial or commercial handling                                                 |
| <b>Respiratory Sensitization</b>                          | Does not cause sensitization                                                                           |
| <b>Serious eye damage/eye irritation</b>                  | Dust may cause mechanical irritation to eyes                                                           |
| <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>Specific target organ toxicity - Single exposure</b>   | No data available.                                                                                     |
| <b>Specific target organ toxicity - Repeated exposure</b> | Based on available data, the classification criteria are not met.                                      |

## 12. ECOLOGICAL INFORMATION

**12.1. Ecotoxicity** Very toxic to aquatic life with long lasting effects.

#### Zinc Oxide

**WGK Classification (AwSV)** 2187 WGK: 2

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|                                                 |                                                                              |
|-------------------------------------------------|------------------------------------------------------------------------------|
| <b>12.2. Persistence and degradability</b>      | No data available.                                                           |
| <b>12.3. Bioaccumulative potential</b>          | No data available.                                                           |
| <b>Partition coefficient</b>                    | No data available                                                            |
| <b>Bioconcentration factor (BCF)</b>            | No data available.                                                           |
| <b>12.4. Mobility in soil</b>                   | No data available.                                                           |
| <b>12.5. Results of PBT and vPvB assessment</b> | This substance does not meet the criteria for classification as PBT or vPvB. |
| <b>12.6. Other adverse effects</b>              | None known                                                                   |

## 13. DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

|                               |                                                                                                                                 |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| <b>Disposal Methods</b>       | Dispose of waste product or used containers according to local regulations. Do not allow to enter into surface water or drains. |
| <b>Contaminated Packaging</b> | Empty containers should be taken to an approved waste handling site for recycling or disposal.                                  |
| <b>Waste codes</b>            | Waste codes should be assigned by the user based on the application for which the product was used                              |

#### Zinc Oxide

**WGK Classification (AwSV)** 2187 WGK: 2

## 14. TRANSPORT INFORMATION

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

|                 |                                                                                                |
|-----------------|------------------------------------------------------------------------------------------------|
| <b>DOT</b>      | UN3077, Environmentally hazardous substances, n.o.s. (Zinc oxide), 9, PG III, Marine Pollutant |
| <b>ADR</b>      | UN3077, Environmentally hazardous substances, n.o.s. (Zinc oxide), 9, PG III, Marine Pollutant |
| <b>ADN</b>      | UN3077, Environmentally hazardous substances, n.o.s. (Zinc oxide), 9, PG III, Marine Pollutant |
| <b>IATA</b>     | UN3077, Environmentally hazardous substances, n.o.s. (Zinc oxide), 9, PG III, Marine Pollutant |
| <b>IMDG/IMO</b> | UN3077, Environmentally hazardous substances, n.o.s. (Zinc oxide), 9, PG III, Marine Pollutant |

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- 14.1. UN number** UN3077
- 14.2. UN proper shipping name** Environmentally hazardous substance, solid, n.o.s. Zinc oxide Marine Pollutant
- 14.3. Transport hazard class(es)** 9
- Subsidiary Risk** -
- 14.4. Packing group** III
- 14.5. Environmental hazards** Marine Pollutant Yes
- EmS:** F-A, S-F
- 14.6. Special precautions for user** Do not handle until all safety precautions have been read and understood.
- 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**  
Not applicable



Marine Pollutant



## 15. REGULATORY INFORMATION

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**
- Global Inventories

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| Chemical Name   | CAS Number | EC No     | REACH registration number | Australia (AICS) | 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 | 01-211946388-1-32         | Y                | Y            | Y             | ENCS: (1)-561 ISHL: (1)-561 | KE-35565        | Y      | Y           | Y                   | Y      | A                   |
| Zinc Molybdenum | 22914-58-5 | 245-322-4 | 01-212080048-1-68-0000    | N                | Y            | Y             | (1)-781 (ENCS)(IS HL)       | KE-11910        | N      | N           | N                   | Y      | A                   |

**Legend**

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

## 16. OTHER INFORMATION

**Prepared by** Huber Engineered Materials Global Regulatory Affairs  
email: regulatory.affairs@huber.com.

**GHS Classification**

**Physical Hazard** Not classified

**Health Hazards** Not classified

**Environmental Hazard** Hazardous to the aquatic environment - Acute, category 1  
Hazardous to the aquatic environment - Chronic, category 1

**Labeling**

**Symbols/Pictograms**



**Signal Word** Warning

**Hazard Statements** Very toxic to aquatic life with long lasting effects

**Training Advice** Do not handle until all safety precautions have been read and understood.

**Abbreviations and acronyms**

International Agency for Research on Cancer (IARC)  
International Air Transport Association (IATA)  
International Maritime Dangerous Goods (IMDG)  
International Uniform Chemical Information Database (IUCLID)  
Workplace Hazardous Materials Information System (WHMIS) status and classification  
EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification  
DOT (Department of Transportation)  
OSHA (Occupational Safety and Health Administration of the US Department of Labor)  
TWA - Time-Weighted Average  
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA)  
The Classification, Labeling and Packaging of Substances and Mixtures (CLP) Regulation (EC

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PPE - Personal Protection Equipment

NIOSH - National Institute for Occupational Safety and Health

TDG (Transport of Dangerous Goods) Canada

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act)

Reportable Quantity (RQ) (RQ/% in mixture)

STEL - Short Term Exposure Limit

TLV® - Threshold Limit Value

Derived No Effect Level (DNEL)

SVHC: Substances of Very High Concern for Authorization:

Land transport (ADR/RID)

Biochemical oxygen demand (BOD)

Chemical oxygen demand (COD)

ICAO (air)

(IMDG) International Maritime Dangerous Goods

Positive Pressure Self-Contained Breathing Apparatus (SCBA)

Predicted No Effect Concentration (PNEC)

Globally Harmonized System (GHS)

**Disclaimer** 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.

**End of Safety Data Sheet**