



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

Revision Number 1.5

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

### 1.1. Product identifier

**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

### 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.huberadvancedmaterials.com](http://www.huberadvancedmaterials.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

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

## Environmental Hazard

Acute Aquatic Toxicity: Category 1  
Chronic Aquatic Toxicity: Category 1

## 2.2. Label elements

### Symbols/Pictograms



### 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/containers in accordance with local regulations.

## 2.3. Other hazards

No information available.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture

Mixture

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Chemical Name	CAS Number	TSCA: United States	EU REACH registration number	Weight-%
Zinc Oxide	1314-13-2	A	01-2119463881-32	>25
Zinc Molybdenum Oxide	22914-58-5 61583-60-6	A	01-2120800481-68-0000	>25

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

## 4. FIRST AID MEASURES

### 4.1. Description of first aid measures

**General Advice**

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.

**Eye Contact**

In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

**Skin Contact**

Wash with plenty of soap and water.

**Ingestion**

Rinse mouth thoroughly with water.

**Inhalation**

Do not breathe dust. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

**Aspiration hazard**

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

**Notes to Physician**

Treat symptomatically.

**4.2. Most important symptoms and effects, both acute and delayed**

Inhalation of dust may cause irritation of the respiratory system. Eye irritation.

**4.3. Indication of any immediate medical attention and special treatment needed**

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**

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None known.

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

Non-combustible.

**5.3. Advice for firefighters****Special protective 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

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## 8.1. Control parameters

### Occupational exposure limits

#### Zinc Oxide

Malaysia

TWA 3 mg/m<sup>3</sup> Fume and respirable dust

NIOSH

Ceiling: 15 mg/m<sup>3</sup> (total dust)

STEL: 10 mg/m<sup>3</sup>(fume)

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 Oxide

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.

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

## 10. STABILITY AND REACTIVITY

10.1. Reactivity	Stable under normal conditions
10.2. Chemical stability	Stable under normal conditions
10.3. Possibility of hazardous reactions	None under normal processing
10.4. Conditions to avoid	Dust formation Incompatible materials
10.5. Incompatible materials	Strong oxidizing agents
10.6. Hazardous decomposition products	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>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>Target Organ Effects</b>	Skin. Eyes. Respiratory system.

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**Specific target organ toxicity - Single exposure** No data available.

**Specific target organ toxicity - Repeated exposure** May cause damage to organs through prolonged or repeated exposure if inhaled. Kidney.

## 12. ECOLOGICAL INFORMATION

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

### Zinc Oxide

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

**12.2. Persistence and degradability** No data available.

**12.3. Bioaccumulative potential** No data available.

**Partition coefficient** No data available

**Bioconcentration factor (BCF)** No data available.

**12.4. Mobility in soil** No data available.

**12.5. Results of PBT and vPvB assessment** This substance does not meet the criteria for classification as PBT or vPvB.

**12.6. Other adverse effects** None known

## 13. DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

**Disposal Methods** Dispose of waste product or used containers according to local regulations. Do not allow to enter into surface water or drains.

**Contaminated Packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal.

**Waste codes** Waste codes should be assigned by the user based on the application for which the product was used

### Zinc Oxide



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WGK Classification (AwSV) 2187 WGK: 2

## 14. TRANSPORT INFORMATION

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

<b>TDG -Canada</b>	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc Oxide, Zinc Molybdate)
<b>DOT</b>	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc Oxide, Zinc Molybdate) Not regulated in non-bulk packages (<119 gal)
<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)

14.1. UN number UN3077

14.2. UN proper shipping name UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc Oxide, Zinc Molybdate)

14.3. Transport hazard class(es) 9

Subsidiary Risk -

14.4. Packing group III

14.5. Environmental hazards Marine Pollutant

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

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Marine Pollutant



## 15. REGULATORY INFORMATION

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### Global Inventories

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	01-211946388 1-32	Y	Y	Y	ENCS: (1)-561 ISHL: (1)-561	KE-35565	Y	Y	Y	Y	A
Zinc Molybdenum Oxide	22914-58-5 61583-60-6	245-322-4	01-212080048 1-68-0000	N	Y	Y	(1)-781 (ENCS)(ISHL)	KE-11910	N	N	N	Y	A

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.

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Not classified

**Health Hazards**

Acute toxicity - Inhalation Category 4

Specific target organ toxicity (STOT) - repeated exposure, category 2

**Environmental Hazard**

Acute Aquatic Toxicity: Category 1

Chronic Aquatic Toxicity: Category 1

**Labeling****Symbols/Pictograms****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

**Training Advice**

Do not handle until all safety precautions have been read and understood

**Abbreviations and acronyms**

IARC (International Agency for Research on Cancer)

IATA (International Air Transport Association)

IMDG (International Maritime Dangerous Goods)

IUCLID (International Uniform Chemical Information Database)

WHMIS (Workplace Hazardous Materials Information System)

DOT (Department of Transportation)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

TWA (Time-Weighted Average)

CLP (The Classification, Labeling and Packaging of Substances and Mixtures Regulation (EC 1272/2008))

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)

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

STEL (Short Term Exposure Limit)

TLV® (Threshold Limit Value)

DNEL (Derived No Effect Level)

SVHC (Substances of Very High Concern)

HUBER

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BOD (Biochemical oxygen demand)  
COD (Chemical oxygen demand)  
ICAO (International Civil Aviation Organization)  
IMDG (International Maritime Dangerous Goods)  
ADR (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  
RID (Agreement Concerning the International Carriage of Dangerous Goods by Rail)  
SCBA (Self-Contained Breathing Apparatus) Positive Pressure  
PNEC (Predicted No Effect Concentration)  
GHS (Globally Harmonized System)  
TSCA (Toxic Substances Control Act)

**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**