



**Kemgard® MZM**

Prepared in accordance with GB/T 16483-2008, GB/T 24774-2009, GB 13690 – 2009, GB/T 17519–2013  
GHS (Globally Harmonized System)

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**Section 1: PRODUCT AND COMPANY IDENTIFICATION**

<b>Product Name:</b>	Kemgard® MZM
<b>Pure substance/mixture</b>	Mixture
<b><u>Magnesium Hydroxide</u></b>	
CAS Number	1309-42-8
Weight-%	> 75
<b><u>Zinc Molybdenum Oxide</u></b>	
CAS Number	22914-58-5 61583-60-6
Weight-%	< 25
<b>Recommended Use</b>	Flame retardant Smoke suppressant
<b>Uses advised against</b>	None known
<b>Company:</b>	J.M. Huber Corporation 3100 Cumberland Boulevard, Suite 600 Atlanta, GA 30339 USA Tel: +1 678 247-7300
<b>Emergency Telephone</b>	CHEMTREC China: 4001-204937 (Mandarin) Local call: +86 532 5879 2008
<b>E-mail</b>	hubermaterials@huber.com
<b>Internet</b>	www.huberadvancedmaterials.com

**Section 2: HAZARDS IDENTIFICATION**

**GHS Classification**

<b>Physical Hazard</b>	Not classified
<b>Health Hazard</b>	Acute toxicity - Inhalation Category 5 Specific target organ toxicity (STOT) - repeated exposure, category 2
<b>Environmental Hazard</b>	Chronic Aquatic Toxicity, Category 3 Acute Aquatic Toxicity Category 2

**Label Elements**

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## Symbols/Pictograms



### Signal Word

Warning

### Hazard Statement

May be harmful if inhaled  
May cause damage to organs through prolonged or repeated exposure  
Toxic to aquatic life  
Harmful to aquatic life with long lasting effects

## Precautionary Statements

### Prevention

Observe good industrial hygiene practices.  
Avoid breathing dust.  
Use mechanical ventilation (dilution and local exhaust) to control exposure  
Avoid release to the environment

### Response

Get medical help if you feel unwell  
IF ON SKIN: Wash with plenty of soap and water  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
IF INHALED: Get medical help.

### Spills and Leaks

Collect spillage

### Storage

Store away from incompatible materials.

### Disposal

Dispose in accordance with local, state and national regulations

### General Advice

In case of doubt or when symptoms persist, seek medical attention.

**Hazards not otherwise classified (HNOC)** None known

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## Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture

Mixture

Chemical Name	CAS Number	China (IECSC)	China classification	TSCA: United States	EU REACH registration number	Weight-%
Magnesium Hydroxide	1309-42-8	Y	Not classified as a dangerous goods/substances	A	01-2119488756-18-0040	> 75
Zinc Molybdenum Oxide	22914-58-5 61583-60-6	Y	Acute Tox. 4, H332 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 2, H411	A	01-2120800481-68-0000	< 25

## Section 4: FIRST AID MEASURES

<b>General Advice</b>	In case of doubt or when symptoms persist, seek medical attention.
<b>Eye Contact</b>	Hold eyelids apart and flush eyes with a steady, gentle stream of water for several minutes.
<b>Skin Contact</b>	IF ON SKIN: Wash with plenty of soap and water
<b>Inhalation</b>	If symptoms occur, remove person to fresh air.
<b>Ingestion</b>	Do not induce vomiting without medical advice
<b>Notes to Physician</b>	Treat symptomatically
<b>Personal Protective Equipment</b>	Wear suitable protective clothing
<b>For First Aid Responders</b>	IF exposed or concerned: Get medical advice/attention
<b>Expected acute symptoms and delayed symptoms</b>	None known

## Section 5: FIRE FIGHTING MEASURES

<b>Flammable Properties</b>	None known
<b>Suitable Extinguishing Media</b>	Water spray (fog) Foam Dry chemical Carbon dioxide (CO2)

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**Unsuitable extinguishing media:** None known

**Specific Hazards Arising from the Chemical** None known

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

## Section 6: SPILLAGE, ACCIDENTAL RELEASE MEASURES

**Personal Precautions** Ensure adequate ventilation. Avoid dust formation. Avoid inhalation of dust. Refer to Section 8 for personal protective equipment.

**Environmental Precautions** Prevent from entering into soil, ditches, sewers and waterways.

**Methods for cleaning up** Sweep or vacuum spilled material

**Other Information:** None known

## Section 7: HANDLING AND STORAGE

**Handling** In case of exposure to environments exceeding the occupational exposure limit, wear a respirator in compliance with national legislation. Handle in accordance with good industrial hygiene and safety practice.

**Storage** Keep container tightly closed in a dry and well-ventilated place

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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

### Magnesium Hydroxide

China

China

ACGIH

NIOSH

OSHA

TWA: Not established

STEL: Not established

TLV-TWA: 8-hr : 10 mg/m<sup>3</sup> (total dust)

3 mg/m<sup>3</sup> (respirable fraction)

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

TWA: 15 mg/m<sup>3</sup> total dust

5 mg/m<sup>3</sup> respirable

### Zinc Molybdenum Oxide

China

China

ACGIH

NIOSH

OSHA

TWA: 8-hour: 4 mg/m<sup>3</sup>

STEL: Not established

TWA: 10 mg/m<sup>3</sup> dust

0.5 mg/m<sup>3</sup> Respirable fraction

8-hr TWA: 10 mg/m<sup>3</sup>

TWA: 5 mg/m<sup>3</sup> (respirable); 10 mg/m<sup>3</sup> (dust)

PEL: 5 mg/m<sup>3</sup> (respirable)

**Engineering Measures** Do not handle until all safety precautions have been read and understood  
Ensure adequate ventilation, especially in confined areas

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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

Protective gloves

### Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

### Hygiene Measures

Wash off with soap and water. Handle in accordance with good industrial hygiene and safety practice

### Environmental Exposure Controls

Dispose of in accordance with local regulations

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

#### Appearance:

Physical State	Solid Powder
Color	White
Odor	Odorless
Odor Threshold	No information available
pH:	9.4
Freezing Point	Not applicable
Flash Point	Not applicable.
Evaporation Rate	Not applicable
Flammability (solid, gas)	Not applicable
Upper flammability limit:	
Lower flammability limit:	
Vapor Pressure	Not applicable
Vapor Density	Not applicable
Relative Density	No data available
Water Solubility	Slightly soluble
Solubility in other solvents	No information available
Partition coefficient	No data available
Autoignition Temperature	Not applicable
Decomposition Temperature	1292 - 1652 °F (700 - 900 °C)

Specific Gravity 2.63 (H<sub>2</sub>O = 1)

9.2. Other information **No data available.**

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## Section 10: STABILITY AND REACTIVITY

<b>Stability</b>	Stable
<b>Conditions to avoid:</b>	None
<b>Incompatible materials</b>	None known
<b>Hazardous decomposition products</b>	By Fire: Carbon dioxide Carbon monoxide Oxides of Metals in composition
<b>Hazardous Reactions</b>	None under normal processing
<b>Hazardous polymerization:</b>	None under normal processing

## Section 11: TOXICOLOGICAL INFORMATION

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

### Product Information

#### Information on Likely Routes of Exposure

<b>Eyes</b>	Dust contact with the eyes can lead to mechanical irritation
<b>Skin</b>	Prolonged or repeated contact may dry skin and cause irritation
<b>Inhalation</b>	Avoid inhalation of the product
<b>Ingestion</b>	Ingestion is not a likely route of exposure
<b>Aspiration hazard</b>	Not an expected route of exposure.

#### 11.1. Information on toxicological effects

##### Magnesium Hydroxide

Oral LD50 8500 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.

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

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<b>Serious eye damage/eye irritation</b>	Dust may cause mechanical irritation to eyes
<b>Respiratory Sensitization</b>	No data available
<b>Skin Sensitization</b>	No data available
<b>Carcinogenicity</b>	There are no known carcinogenic chemicals in this product.
<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.

## Section 12: ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	Harmful to aquatic life with long lasting effects. Avoid release to the environment.
<b>Persistence/Degradability:</b>	No data available.
<b>Bioaccumulative Potential</b>	No data available.
<b>Partition coefficient</b>	No data available
<b>Bioconcentration factor (BCF)</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Results of PBT and vPvB assessment</b>	No data available.
<b>Other Adverse Effects</b>	None known

## Section 13: DISPOSAL CONSIDERATIONS

<b>Waste from Residues/Unused Products</b>	Dispose of in accordance with local regulations
<b>Contaminated Packaging:</b>	Dispose of container and unused contents in accordance with federal, state and local requirements

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## Section 14: TRANSPORT INFORMATION

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

China Dangerous Goods	Not regulated
DOT	Not regulated
ADR	Not regulated
RID	Not regulated
ADN	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated

14.1. UN number None

14.2. UN proper shipping name None

14.3. Transport hazard class(es) None

14.4. Packing group None

14.5. Environmental hazards No

14.6. Special precautions for user Not applicable

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code  
Not applicable

## Section 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
Magnesium Hydroxide	1309-42-8	215-170-3	01-211948875 6-18-0040	Y	Y	Y	(1)-386 (ENCS) (ISHL)	KE-22716	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



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## Section 16: OTHER INFORMATION

**Prepared by** Huber Engineered Materials Global Regulatory Affairs  
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**Reason for Revision** GB/T 16483-2008  
GB/T 24774-2009  
GB 13690 – 2009  
GB/T 17519–2013

### GHS Classification

**Physical Hazard** Not classified

**Health Hazard** Acute toxicity - Inhalation Category 5  
Specific target organ toxicity (STOT) - repeated exposure, category 2

**Environmental Hazard** Chronic Aquatic Toxicity, Category 3  
Acute Aquatic Toxicity Category 2

### Label Elements

#### Symbols/Pictograms



**Signal Word** Warning

**Hazard Statement** May be harmful if inhaled  
May cause damage to organs through prolonged or repeated exposure  
Toxic to aquatic life  
Harmful to aquatic life with long lasting effects

### 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)

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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)  
BOD (Biochemical oxygen demand)  
COD (Chemical oxygen demand)  
ICAO (International Civil Aviation Organization)  
IMDG (International Maritime Dangerous Goods)  
SCBA (Self-Contained Breathing Apparatus) Positive Pressure  
GHS (Globally Harmonized System)  
ADR (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  
RID (Agreement Concerning the International Carriage of Dangerous Goods by Rail)  
SARA (Superfund Amendments and Reauthorization Act of 1986)  
TSCA (Toxic Substances Control Act)

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**End of Safety Data Sheet**