



Kemgard® MZM

GHS (Globally Harmonized System)

Issue Date 01/Jan/2024
Print Date 14/Dec/2023

Revision Number 1.4.3
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Name:	Kemgard® MZM
Pure substance/mixture	Mixture
<u>Magnesium Hydroxide</u>	
CAS Number	1309-42-8
Weight-%	> 75
<u>Zinc Molybdenum Oxide</u>	
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
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Internet	www.huberadvancedmaterials.com
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E-mail	hubermaterials@huber.com
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1.4. Emergency telephone number	CHEMTREC: +1 800 424 9300 or International +1 703 527 3887
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS Classification	Considered a hazardous substance or mixture according to the Globally Harmonized System (GHS)
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Hazards identification

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Physical Hazard	Not classified
Health Hazards	Specific target organ toxicity (STOT) - repeated exposure, category 2
Environmental Hazard	Chronic Aquatic Toxicity Category 3

2.2. Label elements

Symbols/Pictograms



Signal Word	Warning
Hazard Statements	May cause damage to organs through prolonged or repeated exposure Harmful to aquatic life with long lasting effects

Precautionary Statements

Prevention	Do not handle until all safety precautions have been read and understood Employ good industrial hygiene practice Do not breathe dust Wear protective gloves/protective clothing/eye protection/face protection Avoid release to the environment
Response	Get medical advice/attention if you feel unwell IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing IF ON SKIN: Wash with plenty of soap and water
Storage	Keep in a dry place.
Disposal	Dispose of contents/containers in accordance with local regulations. See Section 13: DISPOSAL CONSIDERATIONS.

2.3. Other hazards No information available.

SECTION 3: Composition/information on ingredients

Pure substance/mixture Mixture

Chemical Name	CAS Number	TSCA: United States	EC No	EU REACH registration number	GHS Classification	Weight-%
Magnesium Hydroxide	1309-42-8	A	215-170-3	01-211948 8756-18-0	Not classified	> 75

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				040.		
Zinc Molybdenum Oxide	22914-58-5 61583-60-6	A	245-322-4	01-212080 0481-68-0 000.	Acute Tox. 4, H332 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 2, H411	< 25

SECTION 4: First aid measures

4.1. Description of first aid measures

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	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
Aspiration hazard	Not an expected route of exposure.

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.

SECTION 5: Firefighting 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 (CO2).
Unsuitable Extinguishing Media	Do not use water jetstream.

5.2. Special hazards arising from the substance or mixture Avoid dust formation. Do not breathe dust.

5.3. Advice for firefighters

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Special protective equipment for firefighters

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

Fire-fighting measures

Standard procedure for chemical fires.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Keep unauthorized personnel away. Use personal protection recommended in Section 8.

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. Dispose of in accordance with federal, state and local regulations.

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.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Minimize dust generation and accumulation. Ensure adequate ventilation. Use personal protective equipment as required. Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed and dry. Store away from incompatible materials. See section 10.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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Occupational exposure limits

Magnesium Hydroxide

India

ACGIH

OSHA

TWA: Not established

TLV-TWA: 8-hr : 10 mg/m³ (total dust)

3 mg/m³ (respirable fraction)

TWA: 15 mg/m³ total dust

5 mg/m³ respirable

Zinc Molybdenum Oxide

India

ACGIH

OSHA

TWA: Not established

TWA: 10 mg/m³ dust

0.5 mg/m³ Respirable fraction

TWA: 5 mg/m³ (respirable); 10 mg/m³ (dust)

PEL: 5 mg/m³ (respirable)

Biological Limit Values

None

Recommended monitoring procedures

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

DNEL (Derived No Effect Level)

No data available

PNEC (Predicted No Effect Concentration)

No information available

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

Follow general hygiene considerations recognized as common good workplace practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

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Physical State	Solid. Powder.
Color	White
Odor	Odorless
Odor Threshold	No information available
pH:	9.4
Melting Point / Melting Range	Not applicable
Boiling Point	Not applicable
Freezing Point	Not applicable
Flash Point	Not applicable
Evaporation Rate	Not applicable
Flammability (solid, gas)	Not applicable
Vapor Pressure	Not applicable
Vapor Density	Not applicable
Solubility in other solvents	No information available
Water Solubility	Slightly soluble
Partition coefficient	No data available
Autoignition Temperature	Not applicable
Specific Gravity	2.63 (H ₂ O = 1)
Oxidizing Properties	Not applicable
Decomposition Temperature	1292 - 1652 °F (700 - 900 °C)

SECTION 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	No information available
10.4. Conditions to avoid	Dust formation. Incompatible materials.
10.5. Incompatible materials	Strong oxidizing agents.

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10.6. Hazardous decomposition products None known

SECTION 11: Toxicological information

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

Information on Likely Routes of Exposure

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

Target Organ Effects Kidney (based on tubular degeneration/regeneration of male Han Wistar rats at 125 mg/kg/day)

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

Respiratory Sensitization No data available

Serious eye damage/eye irritation Dust may cause mechanical irritation to eyes

Skin Sensitization No data available

Carcinogenicity There are no known carcinogenic chemicals in this product.

Target Organ Effects Skin. Eyes. Respiratory system.

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.

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SECTION 12: Ecological information

12.1. Ecotoxicity Harmful to aquatic life with long lasting effects. Avoid release to the environment.

Magnesium Hydroxide - 1309-42-8

WGK Classification (AwSV) 5209 WGK: nwg

12.2. Persistence and degradability No data available.

12.3. Bioaccumulative potential No data available.

Partition coefficient No data available.

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil No data available.

12.5. Results of PBT and vPvB assessment No data available.

12.6. Other adverse effects None known

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

Disposal Methods Dispose of waste product or used containers according to local regulations

Magnesium Hydroxide - 1309-42-8

European Waste Catalog 060299

SECTION 14: Transport information

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

DOT Not regulated

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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	01-2119488756-18-0040	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	01-2120800481-68-0000	N	Y: DSL-22914-58-5 NDSL: 61583-60-6	Y	(1)-781 (ENCS)(ISHL)	KE-11910	Y: (MO-generics)	Y	Y	Y	A

SECTION 16: Other information

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Reason for Revision

GHS (Globally Harmonized System).

GHS Classification

Considered a hazardous substance or mixture according to the Globally Harmonized System (GHS)

Labeling

Symbols/Pictograms



Signal Word

Warning

Hazard Statements

May cause damage to organs through prolonged or repeated exposure
Harmful 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)
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

HUBER

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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