Safety Data Sheet

Kemgard® MZM

OSHA HCS 2024
Canadian Workplace Hazardous Material Information System (WHMIS) 2015 rev 2022
Mexico NOM-018-STPS-2000; NOM-018-STPS-2015
GHS (Globally Harmonized System)

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

1.1. Product identifier

Product Name:	Kemgard® MZM
Pure substance/mixture	Mixture

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
Contact E-Mail	www.huberadvancedmaterials.com/contact
1.4. Emergency telephone number	CHEMTREC: +1 800 424 9300 or International 1+703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

OSHA Regulatory Status This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

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

Physical Hazards Not classified.

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

Environmental Hazard Not classified.

2.2. Label elements

Symbols/Pictograms



Signal Word Warning

Hazard Statements May cause damage to organs through prolonged or repeated exposure

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

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
Store away from incompatible materials
Keep in a dry place

Disposal Disposal should be in accordance with applicable regional, national and local laws and regulations

Hazards not otherwise classified (HNOC) None known.

Hazards associated with known None known.

or reasonably anticipated uses

SECTION 3: Composition/information on ingredients

Pure substance/mixture Mixture

Chemical Name	CAS Number	Weight-%
Magnesium Hydroxide	1309-42-8	> 75
Zinc Molybdenum Oxide	22914-58-5 61583-60-6	< 25

SECTION 4: First aid measures

4.1. Description of first aid measures

General Advice Do not handle until all safety precautions have been read and understood. Employ good industrial hygiene practice. Wear suitable protective clothing, gloves and eye/face protection. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. When in doubt or if symptoms are observed, get medical advice.

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 INHALED: Remove 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 Dust contact with the eyes can lead to mechanical irritation. Contact with dust can cause mechanical irritation or drying of the skin.

4.3. Indication of any immediate medical attention and special treatment needed Treatment should be symptomatic and supportive. 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
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
None known.

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. No special fire protection measures are necessary. 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.
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	Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and

accumulation. Do not breathe dust. Ensure adequate ventilation. Wear appropriate personal protective clothing to prevent skin contact. 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.

7.3. Specific end use(s) No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Magnesium Hydroxide

OSHA	TWA: 15 mg/m³ total dust 5 mg/m³ respirable
ACGIH	TLV-TWA: 8-hr : 10 mg/m³ (total dust) 3 mg/m³ (respirable fraction)
NIOSH	TWA 15 mg/m³ (total dust)
Canada	Not established

Zinc Molybdenum Oxide

OSHA	TWA: 5 mg/m³ (respirable); 10 mg/m³ (dust) PEL: 5 mg/m³ (respirable)
ACGIH	TWA: 10 mg/m³ dust 0.5 mg/m³ Respirable fraction
NIOSH	TWA: 10 mg/m³ 8-hour

PNEC (Predicted No Effect Concentration) No information available

DNEL (Derived No Effect Level) No data available

Biological Limit Values No information available

8.2. Exposure controls

Engineering Measures Provide a good standard of controlled ventilation (5 to 10 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 For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn.
Respiratory Protection In case of inadequate ventilation wear respiratory protection.
Thermal hazards None known. Wear suitable protective clothing.

Hygiene Measures	Follow general hygiene considerations recognized as common good workplace practices. The worker should wash daily at the end of each work shift, and prior to eating, drinking, smoking, etc.
Environmental Exposure Controls	Dispose of in accordance with local regulations.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:	
Physical State	Solid Powder
Color	White
Odor	Odorless
pH:	9.4
Melting point / Freezing point	Not applicable
Freezing Point	Not applicable
Flash Point	Not applicable
Flammability	Not applicable
Upper flammability limit:	--
Lower flammability limit:	--
Vapor Pressure	Not applicable
Relative Vapor Density	Not applicable
Relative Vapor Density	Not applicable
Density	No data available
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)
Viscosity	No information available.
Kinematic viscosity	Not applicable
Oxidizing Properties	Not applicable
Particle Characteristics	No information available
Specific Gravity	2.63 (H2O = 1)
VOC Content (%)	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes
Not applicable

9.2.2. Other safety characteristics
Not applicable

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
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.

11.1. Information on toxicological effects

Magnesium Hydroxide

LD50s and LC50s	> 2.1 mg/L Inhalation LC50 = 8500 mg/kg Oral LD50

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.

Information on Likely Routes of Exposure

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

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties	This product does not contain any known or suspected endocrine disruptors
11.2.2. Other information	Not applicable

SECTION 12: Ecological information

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

Magnesium Hydroxide

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)	No data available.
12.4. Mobility in soil	No data available.
12.5. Results of PBT and vPvB assessment	No data available.
12.6. Endocrine disrupting properties	This product does not contain any known or suspected endocrine disruptors
12.7. Other Adverse Effects	None known

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal Methods	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated Packaging	Product residue may remain in empty containers. 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

Magnesium Hydroxide

European Waste Catalog	060299
WGK Classification (AwSV)	5209. WGK: nwg

SECTION 14: Transport information

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

TDG -Canada	Not regulated
DOT	Not regulated
ADR	Not regulated
RID	Not regulated
ADN	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated
ICAO	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. Maritime transport in bulk according to IMO instruments
Not applicable

SECTION 15: Regulatory information

Global Inventories

Pure substance/mixture Mixture

Chemical Name	CAS Number	EC No	Australia (AIIC)	Canada (DSL)	China (IECSC)	Japan	S. Korea (KECL)	Mexico	Thailand (TECI)	New Zealand	Taiwan	Philippines (PICCS)	TSCA: United States
Magnesium Hydroxide	1309-42-8	215-170-3	Y	Y	Y	(1)-386 (ENCS) (ISHL)	KE-22716	Y	55-1-01344	Y	Y	Y	A
Zinc Molybdenum Oxide	22914-58-5 61583-60-6	245-322-4	Y	Y: DSL-22914-58-5 NDSL: 61583-60-6	Y	(1)-781 (ENCS)(ISHL)	KE-11910	Y: (MO-generics)	Y	Y	Y	Y	A

US Federal Regulations

EPA

SARA 313
Listed: N982 - Zinc compounds

Zinc Molybdenum Oxide

CERCLA	Listed
SARA 313	Listed

SARA 311/312 Hazardous Categorization
Refer to Section 2

CWA (Clean Water Act)
Not listed

CAA (Clean Air Act)
Not listed

U.S. State Right-to-Know Regulations

Chemical Name	CAS Number	California Proposition 65	Massachusetts	Minnesota	New Jersey	Pennsylvania
Magnesium Hydroxide	1309-42-8	N	N	N	N	N
Zinc Molybdenum Oxide	22914-58-5 61583-60-6	N	Y	Y	Y	Y

CANADA

WHMIS
This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR

SECTION 16: Other information

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Issue Date	10/Nov/2026
Print Date	11/Nov/2026
Revision Number	1.5
Reason for Version	OSHA (Occupational Safety and Health Administration of the US Department of Labor).
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
GHS (Globally Harmonized System)
SARA (Superfund Amendments and Reauthorization Act of 1986)
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