Safety Data Sheet

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)

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Kemgard® MZM

Pure substance/mixture Mixture

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

Recommended Use Flame retardant Smoke suppressant

Uses advised against None known

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Section 2: HAZARDS IDENTIFICATION

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

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

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

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

Eye Contact Hold eyelids apart and flush eyes with a steady, gentle stream of water for several minutes.

Skin Contact IF ON SKIN: Wash with plenty of soap and water

Inhalation If symptoms occur, remove person to fresh air.

Ingestion Do not induce vomiting without medical advice

Notes to Physician Treat symptomatically

Personal Protective Equipment For First Aid Responders Wear suitable protective clothing
IF exposed or concerned: Get medical advice/attention

Expected acute symptoms and delayed symptoms None known

Section 5: FIRE FIGHTING MEASURES

Flammable Properties None known

Suitable Extinguishing Media Water spray (fog)
Foam
Dry chemical
Carbon dioxide (CO2)

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 exhaustion at critical locations

Magnesium Hydroxide

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

Zinc Molybdenum Oxide

China	TWA: 8-hour: 4 mg/m³
China	STEL: Not established
ACGIH	TWA: 10 mg/m³ dust 0.5 mg/m³ Respirable fraction
NIOSH	8-hr TWA: 10 mg/m³
OSHA	TWA: 5 mg/m³ (respirable); 10 mg/m³ (dust) PEL: 5 mg/m³ (respirable)

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	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 (H2O = 1)
9.2. Other information	**No data available.**

Section 10: STABILITY AND REACTIVITY

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

Eyes	Dust contact with the eyes can lead to mechanical irritation
Skin	Prolonged or repeated contact may dry skin and cause irritation
Inhalation	Avoid inhalation of the product
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
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

Serious eye damage/eye irritation	Dust may cause mechanical irritation to eyes
Respiratory Sensitization	No data available
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.

Section 12: ECOLOGICAL INFORMATION

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

Section 13: DISPOSAL CONSIDERATIONS

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

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 (AIIC)	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	Y	(1)-781 (ENCS)(ISHL)	KE-11910	N	N	N	Y	A

Section 16: OTHER INFORMATION

Prepared by

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Reason for Revision

GB/T 16483-2008
GB/T 24774-2009
GB 13690 – 2009
GB/T 17519–2013

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Hazard Statement

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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)

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)

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