



Kemgard® MZM

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006
COMMISSION REGULATION (EU) No. 2020/878

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Print Date 10/Jan/2024

Revision Number 1.5

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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

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

Manufacturer J.M. Huber Corporation
3100 Cumberland Boulevard, Suite 600
Atlanta, GA 30339 USA
Tel: +1 678 247-7300

Company: J.M. Huber Corporation
Cumberland Boulevard, Suite 600 , GA 30339 USA : +1 678 247-7300

Internet www.huberadvancedmaterials.com

Contact E-Mail www.huberadvancedmaterials.com/contact

E-mail hubermaterials@huber.com

1.4. Emergency telephone number CHEMTREC: +1 800 424 9300 or International +1 703 527 3887

Poison control center phone number National Anti-Poison Center UK: +44 844 892 0111 (National Poisons Information Service)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

(CLP) Regulation (EC 1272/2008) This mixture is classified as hazardous according to regulation (EC) No. 1272/2008
[CLP]

Hazards identification

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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

H373 – May cause damage to organs (kidneys) through prolonged or repeated exposure

H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements**Prevention**P260 - Do not breathe dust
P273 - Avoid release to the environment
Employ good industrial hygiene practice
Wash hands thoroughly after handling**Response**P314 - 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
Store away from incompatible materials**Disposal**

P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Mixture

Chemical Name	CAS Number	EC No	(CLP) Regulation (EC	Weight-%
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			1272/2008)	
Magnesium Hydroxide	1309-42-8	215-170-3	Not classified.	> 75
Zinc Molybdenum Oxide	22914-58-5 61583-60-6	245-322-4	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

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.

Inhalation

Do not breathe dust. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

Ingestion

Rinse mouth thoroughly with water.

Aspiration hazard

Not an expected route of exposure.

Notes to Physician

Treat symptomatically.

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

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.

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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.

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 handlingAvoid 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

SECTION 8: Exposure controls/personal protection

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8.1. Control parameters

Occupational exposure limits

Magnesium Hydroxide

ACGIHTLV-TWA: 8-hr : 10 mg/m³ (total dust)3 mg/m³ (respirable fraction)**OSHA**TWA: 15 mg/m³ total dust5 mg/m³ respirable**NIOSH**TWA: 15 mg/m³ (total dust)

Zinc Molybdenum Oxide

ACGIHTWA: 10 mg/m³ dust0.5 mg/m³ Respirable fraction**OSHA**TWA: 5 mg/m³ (respirable); 10 mg/m³ (dust)PEL: 5 mg/m³ (respirable)**NIOSH**8-hr TWA: 10 mg/m³**Bulgaria**TWA: 10 mg/m³**Czech Republic**Ceiling: 25mg/m³**Estonia**TWA: 5 mg/m³TWA: 5 mg/m³ (respirable dust)10 mg/m³ (total dust)**Estonia**STEL: 0.5 mg/m³**Finland**TWA: 0,5 mg/m³**France**VLE: 10 mg/m³VME: 5 mg/m³**Germany**DFG MAK: TWA: 2 mg/m³ (inhalable fraction)0,1 mg/m³ (respirable fraction)**Poland**STEL: 10 mg/m³TWA: 4 mg/m³**Poland**STEL 10 mg/m³**Slovakia**TWA 2 mg/m³ Inhalable fraction0,1 mg/m³ Respirable fraction**Slovenia**TWA: 5 mg/m³ (inhalable fraction)**Spain**STEL 10 mg/m³ Respirable fraction

Recommended monitoring procedures

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

Biological Limit Values

None

DNEL (Derived No Effect Level) No data available**PNEC (Predicted No Effect Concentration)** No data 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

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Personal protective equipment**Eye/Face Protection** Wear safety glasses with side shields (or goggles).**Skin and Body Protection** Wear suitable protective clothing.**Thermal hazards** None known.**Hygiene Measures** Follow general hygiene considerations recognized as common good workplace practices**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
Odor Threshold	No information available
pH:	9.4
Melting point / Freezing point	Not applicable
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
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 Size	No information available
Specific Gravity	2.63 (H ₂ O = 1)
VOC Content (%)	Not applicable

9.2. Other information

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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.
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11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**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
Respiratory Sensitization	No data available
Serious eye damage/eye irritation	Dust may cause mechanical irritation to eyes
Skin Sensitization	No data available

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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
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Magnesium Hydroxide**WGK Classification (AwSV)** 5209 WGK: nwg

12.2. Persistence and degradability	No data available.
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12.3. Bioaccumulative potential	No data available.
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Partition coefficient No data available**Bioconcentration factor (BCF)** No data available.

12.4. Mobility in soil	No data available.
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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

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

14.2. UN proper shipping name None

14.3. Transport hazard class(es) None

14.4. Packing group None

14.5. Environmental hazards No

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14.6. Special precautions for user Not applicable

14.7. Maritime transport in bulk according to IMO instruments
Not applicable

SECTION 15: Regulatory information

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

Global Inventories

Pure substance/mixture

Mixture

Chemical Name	CAS Number	EC No	Australia (AIC)	Canada (DSL)	China (IECSC)	Japan	S. Korea (KECL)	Mexico	Thailand (TECI)	New Zealand	Philippines (PICCS)	Taiwan	TSCA: United States
Magnesium Hydroxide	1309-42-8	215-170-3	Y	Y	Y	(1)-386 (ENCS) (ISHL)	KE-22716	Y	55-1-01343	Y	Y	Y	A
Zinc Molybdenum Oxide	22914-58-5 61583-60-6	245-322-4	N	Y	Y	(1)-781 (ENCS)(ISHL)	KE-11910	N	Y	N	N	Y	A

REACH No.

Magnesium Hydroxide

EU REACH registration number 01-2119488756-18-0040

Turkish KKDIK pre-registration 05-0000192735-90-0000

Zinc Molybdenum Oxide

EU REACH registration number 01-2120800481-68-0000

Turkish KKDIK pre-registration 05-0000192714-03-0000

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

Magnesium Hydroxide

WGK Classification (AwSV) 5209 WGK: nwg

15.2. Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance

SECTION 16: Other information

Reason for Revision

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 & COMMISSION REGULATION (EU) No. 2020/878

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email: regulatory.affairs@huber.com.**(CLP) Regulation (EC 1272/2008)** This mixture is classified as hazardous according to regulation (EC) No. 1272/2008 [CLP]**Labeling****Symbols/Pictograms****Signal Word** Warning**Hazard Statements** H373 – May cause damage to organs (kidneys) through prolonged or repeated exposure. H412 - 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)
IUCLID (International Uniform Chemical Information Database)
WHMIS (Workplace Hazardous Materials Information System)
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)
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)
IATA (International Air Transport Association)
IMDG (International Maritime Dangerous Goods)
DOT (Department of Transportation)
TDG (Transport of Dangerous Goods) Canada
PNEC (Predicted No Effect Concentration)
SCBA (Self-Contained Breathing Apparatus) Positive Pressure
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

HUBER

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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