



Kemgard® HPSS

GHS (Globally Harmonized System)

Issue Date 01/Jan/2024

Print Date 14/Dec/2023

Revision Number 1.3.1

Page 1 of 12

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

1.1. Product identifier

Product Name: Kemgard® HPSS

Pure substance/mixture Mixture

Magnesium Hydroxide

CAS Number 1309-42-8

Weight-% >25

Zinc Oxide

CAS Number 1314-13-2

Weight-% 10-30

Zinc Molybdenum Oxide

CAS Number 22914-58-5

61583-60-6

Weight-% >5

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

E-mail hubermaterials@huber.com

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

GHS Classification

Safety Data Sheet

Kemgard® HPSS**Issue Date** 01/Jan/2024**Print Date** 14/Dec/2023**Revision Number** 1.3.1**Page** 2 of 12**Hazards identification****Physical Hazard**

Not classified

Health Hazards

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

Environmental HazardAcute Aquatic Toxicity: Category 1
Chronic Aquatic Toxicity: Category 1**2.2. Label elements****Symbols/Pictograms****Signal Word**

Warning

Hazard StatementsH373 - May cause damage to organs through prolonged or repeated exposure
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects**Precautionary Statements****Prevention**P202 - Do not handle until all safety precautions have been read and understood
P260 - Do not breathe dust
P273 - Avoid release to the environment**Response**P314 - Get medical advice/attention if you feel unwell
P391 - Collect spillage
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water [or shower]
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing**Storage**

Store away from incompatible materials.

Disposal

P501 - Dispose of contents/containers in accordance with local regulations.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

Pure substance/mixture

Mixture

Safety Data Sheet

Kemgard® HPSS

Issue Date 01/Jan/2024

Print Date 14/Dec/2023

Revision Number 1.3.1

Page 3 of 12

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 8756-18-0 040.	Not classified	>25
Zinc Oxide	1314-13-2	A	215-222-5	01-211946 3881-32.	Aquatic Acute Category 1; H400 Aquatic Chronic Category 1; H410	10-30
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	>5

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

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Skin Contact

Wash with plenty of soap and water.

Ingestion

Rinse mouth thoroughly with water.

Inhalation

Do not breathe dust. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

4.2. Most important symptoms and effects, both acute and delayed

May cause irritation to mucous membranes and respiratory tract. 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.

Safety Data Sheet

Kemgard® HPSS

Issue Date 01/Jan/2024

Print Date 14/Dec/2023

Revision Number 1.3.1

Page 4 of 12

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media

Water spray (fog). Foam. Dry chemical. Carbon dioxide (CO2).

Unsuitable Extinguishing Media

Do not use water jetstream.

Flammable Properties

None known.

5.2. Special hazards arising from the substance or mixture

Avoid dust formation. Do not breathe dust.

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. 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

Safety Data Sheet

Kemgard® HPSS**Issue Date** 01/Jan/2024**Print Date** 14/Dec/2023**Revision Number** 1.3.1**Page** 5 of 12**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**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 dust5 mg/m³ respirable**Zinc Oxide**

India

ACGIH

OSHA

STEL: 10 mg/m³ (fume)TWA: 5 mg/m³ (fume); 10 mg/m³ (total dust)STEL: 10 mg/m³ (respirable)TWA: 2 mg/m³ (respirable)PEL: 15 mg/m³ (total dust)5 mg/m³ (respirable fraction)**Zinc Molybdenum Oxide**

India

ACGIH

OSHA

TWA: Not established

TWA: 10 mg/m³ dust0.5 mg/m³ Respirable fractionTWA: 5 mg/m³ (respirable); 10 mg/m³ (dust)PEL: 5 mg/m³ (respirable)**Biological Limit Values**

No information available

Recommended monitoring procedures

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

DNEL (Derived No Effect Level)

No information 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)

Safety Data Sheet

Kemgard® HPSS**Issue Date** 01/Jan/2024**Print Date** 14/Dec/2023**Revision Number** 1.3.1**Page** 6 of 12

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. 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. Do not empty into drains or water courses.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State	Solid. Powder.
Color	White
Odor	Odorless
Odor Threshold	No information available
pH:	8.9
Melting Point / Melting Range	No information available
Boiling Point	No information available
Freezing Point	No information available
Flash Point	Not applicable
Evaporation Rate	Not applicable
Flammability (solid, gas)	No information available
Vapor Pressure	No data available
Vapor Density	Not applicable
Solubility in other solvents	No information available

Safety Data Sheet

Kemgard® HPSS**Issue Date** 01/Jan/2024**Print Date** 14/Dec/2023**Revision Number** 1.3.1**Page** 7 of 12

Water Solubility	Slightly soluble
Partition coefficient	No data available
Autoignition Temperature	No data available
Viscosity	No information available
Oxidizing Properties	Not applicable
VOC Content (%)	Not applicable
Decomposition Temperature	No information available

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	None under normal processing
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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Information on Likely Routes of Exposure

Inhalation	May cause respiratory tract irritation
Skin	No known hazard in contact with skin
Eyes	Dust contact with the eyes can lead to mechanical irritation
Ingestion	Ingestion is not a likely route of exposure
Symptoms related to the physical, chemical and toxicological characteristics	Dust may cause mechanical irritation to eyes.

Safety Data Sheet

Kemgard® HPSS

Issue Date 01/Jan/2024

Print Date 14/Dec/2023

Revision Number 1.3.1

Page 8 of 12

11.1. Information on toxicological effects

Magnesium Hydroxide

Oral LD50 8500 mg/kg Rat

Zinc Oxide

Oral LD50 7950 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 Low hazard for usual industrial or commercial handling

Respiratory Sensitization Does not cause sensitization

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

Skin Corrosion/Irritation Contact with dust can cause mechanical irritation or drying of the skin

Skin Sensitization Not a skin sensitizer

Germ cell mutagenicity No data available.

Reproductive Effects This product does not contain any known or suspected reproductive hazards.

Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

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

12.1. Ecotoxicity Very toxic to aquatic life with long lasting effects.

Magnesium Hydroxide - 1309-42-8

WGK Classification (AwSV) 5209 WGK: nwg

Zinc Oxide - 1314-13-2

WGK Classification (AwSV) 2187 WGK: 2

Safety Data Sheet

Kemgard® HPSS**Issue Date** 01/Jan/2024**Print Date** 14/Dec/2023**Revision Number** 1.3.1**Page** 9 of 12

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 This substance does not meet the criteria for classification as PBT or vPvB.

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 Do not allow to enter into surface water or drains

Magnesium Hydroxide - 1309-42-8

European Waste Catalog 060299

SECTION 14: Transport information

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

DOT UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc Oxide, Zinc Molybdate)
Not regulated in non-bulk packages (<119 gal)

ADR UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc Oxide, Zinc Molybdate)

RID UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc Oxide, Zinc Molybdate)

ADN UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc Oxide, Zinc Molybdate)

IATA UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc

Safety Data Sheet

Kemgard® HPSS**Issue Date** 01/Jan/2024**Print Date** 14/Dec/2023**Revision Number** 1.3.1**Page 10 of 12**

Oxide, Zinc Molybdate)

IMDG/IMO

UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc Oxide, Zinc Molybdate)

ICAO

UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide)

14.1. UN number

UN3077

14.2. UN proper shipping name

UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc Oxide, Zinc Molybdate)

14.3. Transport hazard class(es) 9**14.4. Packing group**

III

14.5. Environmental hazards

Yes Marine Pollutant

14.6. Special precautions for user

Do not handle until all safety precautions have been read and understood.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

**Marine Pollutant**

Safety Data Sheet

Kemgard® HPSS

Issue Date 01/Jan/2024

Print Date 14/Dec/2023

Revision Number 1.3.1

Page 11 of 12

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 Oxide	1314-13-2	215-222-5	01-211946388 1-32	Y	Y	Y	ENCS: (1)-561 ISHL: (1)-561	KE-35565	Y	Y	Y	Y	A
Zinc Molybdenum Oxide	22914-58-5 61583-60-6	245-322-4	01-212080048 1-68-0000	N	Y: DSL-229 14-58 -5 NDSL: 61583-60 -6	Y	(1)-781 (ENCS)(ISHL)	KE-11910	Y: (MO-generics)	Y	Y	Y	A

SECTION 16: Other information

Prepared by

Huber Engineered Materials Global Regulatory Affairs
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Reason for Revision

GHS (Globally Harmonized System).

GHS Classification

Labeling

Symbols/Pictograms



Signal Word

Warning

Hazard Statements

H373 - May cause damage to organs through prolonged or repeated exposure
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Safety Data Sheet

Kemgard® HPSS**Issue Date** 01/Jan/2024**Print Date** 14/Dec/2023**Revision Number** 1.3.1**Page 12 of 12****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 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