

Kemgard® HPSS

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

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

1.1. Product identifier

Product Name: Kemgard® HPSS

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

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

Physical Hazard Not classified

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

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Acute Aquatic Toxicity: Category 1 **Environmental Hazard**

Chronic Aquatic Toxicity: Category 1

2.2. Label elements

Symbols/Pictograms



Signal Word Warning

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

H410 - Very toxic to aquatic life with long lasting effects

H400 - Very toxic to aquatic life

Precautionary Statements

P202 - Do not handle until all safety precautions have been read and understood Prevention

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/ container to an approved waste disposal plant.

No information available. 2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixture Mixture

Chemical Name	CAS Number	EC No	(CLP) Regulation (EC 1272/2008)	Weight-%
Magnesium Hydroxide	1309-42-8	215-170-3	Not classified.	>25
Zinc Oxide	1314-13-2	215-222-5	Aquatic Acute Category 1; H400. Aquatic Chronic Category 1; H410.	10-30

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Zinc Molybdenum Oxide 22914-58-5 245-322-4 Acute Tox. 4, H332 >5 61583-60-6 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 2, H411.

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.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact **Eye Contact**

lenses, if present and easy to do. Continue rinsing.

Skin Contact Wash with plenty of soap and 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.

Ingestion Rinse mouth thoroughly with water.

Aspiration hazard Based on available data, the classification criteria are not met.

Notes to Physician Treat symptomatically.

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.

medical attention and special

treatment needed

4.3. Indication of any immediate 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

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

Unsuitable Extinguishing Media

None known.

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5.2. Special hazards arising from the substance or mixture

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. 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

Avoid dust formation. Ensure adequate ventilation. Use personal protection

recommended in Section 8. Keep unauthorized personnel away.

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

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, Keep container tightly closed and dry including any incompatibilities Store away from incompatible materials

SECTION 8: Exposure controls/personal protection

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8.1. Control parameters

Occupational exposure limits

Magnesium Hydroxide

ACGIH TLV-TWA: 8-hr : 10 mg/m³ (total dust)

3 mg/m³ (respirable fraction) TWA: 15 mg/m³ total dust

5 mg/m³ respirable

NIOSH TWA: 15 mg/m³ (total dust)

Zinc Oxide

OSHA

OSHA

ACGIH STEL: 10 mg/m³ (respirable)

TWA: 2 mg/m³ (respirable) PEL: 15 mg/m³ (total dust)

5 mg/m³ (respirable fraction)
NIOSH Ceiling: 15 mg/m³ (total dust)

STEL: 10 mg/m³(fume) TWA: 5 mg/m³ (total dust)

AustriaMAK: 5 mg/m³ (fume, respirable dust)BelgiumSTEL: 10 mg/m³ (fume, respirable fraction)

TWA: 5 mg/m³ (fume); 2 mg/m³ (respirable fraction

Bulgaria STEL: 10 mg/m³

TWA: 5 mg/m³

Cyprus TWA: 5 mg/m³ (fume)
Czech Republic Ceiling: 5 mg/m³
TWA: 2 mg/m³

DenmarkTLV: 4 mg/m³EstoniaTWA: 5 mg/m³

Finland STEL: 10 mg/m³ (fume)

TWA: 2 mg/m³ (fume)

France VME: 5 mg/m³ (fume); 10 mg/m³ (dust)

Germany DFG MAK: TWA: 1 mg/m³ (respirable)

Greece STEL: 10 mg/m³ (fume)

5 mg/m³ (fume)

Hungary STEL: 20 mg/m³ (respirable)
TWA: 5 mg/m³ (respirable)

Iceland TWA: 4 mg/m³ (fume)

Ireland STEL: 10 mg/m³ (respirable fraction & fume)

TWA: 2 mg/m³ (respirable fraction & fume) STEL: 10 mg/m³ (respirable fraction)

Italy STEL: 10 mg/m³ (respirable fraction TWA: 2 mg/m³ (respirable fraction)

LatviaTWA: 0.5 mg/m³LithuaniaTWA: 5 mg/m³

 Norway
 TLV: 5 mg/m³

 Poland
 STEL: 10 mg/m³ (fume)

TWA: 5 mg/m³ (fume)

Portugal TWA: 2 mg/m³ (respirable fraction) **Portugal** STEL 10 mg/m³ Respirable fraction

Romania TWA: 5 mg/m³ (fume) Romania STEL 10 mg/m³ Fume

Slovakia STEL: 1 mg/m³ (respirable fume)
TWA: 1 mg/m³ (respirable fume)

Slovenia TWA: 5 mg/m³ (respirable fume)

Spain STEL: 10 mg/m³ (respirable fraction)

TWA: 2 mg/m³ (respirable fraction)

Sweden TWA: 5 mg/m³ (total dust)

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Switzerland STEL: 3 mg/m³ (fume & respirable dust)

TWA 3 mg/m³ (fume & respirable dust) STEL 3 mg/m³ Fume and respirable

dus

Zinc Molybdenum Oxide

Switzerland

NIOSH

Bulgaria

Estonia

Finland

France

Czech Republic

ACGIH TWA: 10 mg/m³ dust

0.5 mg/m³ Respirable fraction

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

PEL: 5 mg/m³ (respirable) TWA 8-hr: 10 mg/m³ TWA: 10 mg/m³ Ceiling: 25 mg/m³

TWA: 5 mg/m³

Estonia TWA: 5 mg/m³ (respirable dust)

10 mg/m³ (total dust) STEL: 0.5 mg/m³ TWA: 0,5 mg/m³ VLE: 10 mg/m³

VLE: 10 mg/m³ VME: 5 mg/m³

Germany DFG MAK: TWA: 2 mg/m³ (inhalable fraction)

0,1 mg/m³ (respirable fraction)

Poland STEL: 10 mg/m³
TWA: 4 mg/m³

Poland STEL 10 mg/m³

Slovakia TWA 2 mg/m³ Inhalable fraction 0,1 mg/m³ Respirable fraction

SloveniaTWA: 5 mg/m³ (inhalable fraction)SpainSTEL 10 mg/m³ Respirable fraction

Recommended monitoring

procedures

Refer also to national guidance documents for information on currently

recommended monitoring procedures

Biological Limit Values No information available

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.

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Thermal hazards None known.

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 Dispose of in accordance with local regulations

Controls Do not empty into drains or water courses

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: 8.9

Melting Point / Melting Range No information available

Melting point / Freezing point Not applicable

Initial boiling pointNo information availableBoiling PointNo information availableFreezing PointNo information available

Flash Point Not determined Evaporation Rate Not applicable.

Flammability (solid, gas) No information available

Upper flammability limit: -Lower flammability limit: --

Vapor PressureNo data availableVapor DensityNot applicableVapor DensityNot applicableDensityNo data available

Relative Density 3.5

Water Solubility Slightly soluble

Solubility in other solvents
Partition coefficient
Autoignition Temperature
Decomposition Temperature
Viscosity

No information available
No information available
No information available.

Kinematic viscosity
Oxidizing Properties
Not applicable
Not applicable

Particle Size No information available

VOC Content (%) Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Not applicable

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9.2.2. Other safety characteristics

Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity Stable under normal conditions

Stable under normal conditions 10.2. Chemical stability

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 None known

products

SECTION 11: Toxicological information

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

equivalent values.

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Magnesium Hydroxide

8500 mg/kg Rat Oral LD50

Zinc Oxide

LD50s and LC50s 5000 mg/kg Oral LD50 Rat

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 Dust may cause mechanical irritation to eyes

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irritation

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.

This product does not contain any carcinogens or potential carcinogens as listed Carcinogenicity

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.

Information on Likely Routes of Exposure

May cause respiratory tract irritation Inhalation

Ingestion is not a likely route of exposure Ingestion

Skin No known hazard in contact with skin

Dust contact with the eyes can lead to mechanical irritation **Eves**

Aspiration hazard Not an expected route of exposure.

Symptoms related to the physical, chemical and toxicological characteristics Dust may cause mechanical irritation to eyes.

11.2. Information on other hazards

This product does not contain any known or suspected endocrine disruptors 11.2.1. Endocrine disrupting

properties

11.2.2. Other information Not applicable

SECTION 12: Ecological information

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

Magnesium Hydroxide

WGK Classification (AwSV) 5209 WGK: nwg

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Zinc Oxide

WGK Classification (AwSV) 2187 WGK: 2

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

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

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 Dispose of waste product or used containers according to local regulations. Do not

allow to enter into surface water or drains.

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

Magnesium Hydroxide

European Waste Catalog 060299

WGK Classification (AwSV) 5209 WGK: nwg

Zinc Oxide

WGK Classification (AwSV) 2187 WGK: 2

SECTION 14: Transport information

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

TDG -Canada UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc

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Oxide, Zinc Molybdate)

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

Oxide, Zinc Molybdate),

, Not regulated in non-bulk packages (<119 gal)

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

Oxide. Zinc Molvbdate)

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

Oxide, Zinc Molybdate)

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

Oxide, Zinc Molybdate)

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

Oxide, Zinc Molybdate)

UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc IMDG/IMO

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

14.5. Environmental hazards Yes Marine Pollutant

EmS: F-A. S-F

14.6. Special precautions for

user

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

14.7. Maritime transport in bulk according to IMO instruments

Not applicable



Marine Pollutant

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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 (AIIC)	Canada (DSL)	China (IECSC)	Japan	S. Korea (KECL)	Mexico	Thailand (TECI)		Philippine s (PICCS)	Taiwan	TSCA: United States
Magnesium Hydroxide	1309-42-8	215-170-3	Y	Y	Y	(1)-386 (ENCS) (ISHL)	KE-22716	Y	55-1-0134 3	Y	Y	Υ	А
Zinc Oxide		215-222-5		Υ	Y	ENCS: (1)-561 ISHL: (1)-561	KE-35565	Y	55-1-0137 7	Y	Y	Υ	Α
Zinc Molybdenum Oxide	22914-58- 5 61583-60- 6			Y: DSL-2291 4-58 -5 NDSL: 61583-60- 6	Y	(1)-781 (ENCS)(IS HL)	KE-11910	Y: (MO-gene rics)	Y	Y	Y	Y	A

REACH No.

Magnesium Hydroxide

EU REACH registration number 01-2119488756-18-0040 **Turkish KKDIK pre-registration** 05-0000192735-90-0000

Zinc Oxide

EU REACH registration number 01-2119463881-32 Turkish KKDIK pre-registration 05-0000192715-32-0000

Zinc Molybdenum Oxide

EU REACH registration number 01-2120800481-68-0000

Germany

Very toxic to aquatic life with long lasting effects Magnesium Hydroxide

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WGK Classification (AwSV) 5209 WGK: nwg

Zinc Oxide

WGK Classification (AwSV) 2187 WGK: 2

15.2. Chemical safety assessment

Chemical Safety Assessments have been carried out for these substances

SECTION 16: Other information

This safety data sheet complies with the requirements of Regulation (EC) No. Reason for Revision

1907/2006 & COMMISSION REGULATION (EU) No. 2020/878

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Prepared by **Huber Engineered Materials Global Regulatory Affairs**

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. H410 - Very toxic to aquatic life with long lasting effects. H400 - Very

toxic to aquatic life.

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Training Advice

Abbreviations and acronyms

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

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

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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