



Safety Data Sheet

FIRE RETARDANT ADDITIVES

Malaysia CLASS Regulation, 2013
Globally Harmonized System (GHS)

Issue Date: 01/Oct/2020
Print Date: 08/Oct/2020

Revision Number: 1.3

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Name: Kemgard® HPSS-UF

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

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.hubermaterials.com

E-mail hubermaterials@huber.com

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

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

GHS Classification Hazardous to the aquatic environment - Acute, category 1

Issue Date: 01/Oct/2020
Print Date: 08/Oct/2020

Revision Number: 1.3
Page 2 of 11

Hazardous to the aquatic environment - Chronic, category 1

Hazards identification**Physical Hazard**

Not classified

Health Hazards

Not classified

Environmental Hazard

Hazardous to the aquatic environment - Acute, category 1
Hazardous to the aquatic environment - Chronic, category 1

2.2. Label elements**Symbols/Pictograms****Signal Word**

Warning

Hazard Statements

H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements**Prevention**

P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P280 - Wear protective gloves/protective clothing and eye/face protection
P260 - Do not breathe dust
P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P273 - Avoid release to the environment
Employ good industrial hygiene practice

Response

P391 - Collect spillage
P308 + P311 - IF exposed or concerned: Call a POISON CENTER or doctor
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water [or shower]

Storage

Store away from incompatible materials.

Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant.

2.3. Other hazards

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture

Mixture

Issue Date: 01/Oct/2020
Print Date: 08/Oct/2020**Revision Number:** 1.3
Page 3 of 11

Chemical Name	CAS Number	TSCA: United States	REACH registration number	Weight-%
Magnesium Hydroxide	1309-42-8	A	01-2119488756-18-0040	>25
Zinc Oxide	1314-13-2	A	01-2119463881-32	10-30
Zinc Molybdenum	22914-58-5 61583-60-6	A	01-2120800481-68-0000	>5

Legend X / Y: Complies ; A: Active ; - / N: Exempt Not Listed

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.

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.

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.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

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

Issue Date: 01/Oct/2020
Print Date: 08/Oct/2020

Revision Number: 1.3
Page 4 of 11

Unsuitable Extinguishing Media
None known.

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.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures Ensure adequate ventilation. Use personal protection recommended in Section 8. Avoid dust formation. 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.

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Issue Date: 01/Oct/2020
Print Date: 08/Oct/2020

Revision Number: 1.3
Page 5 of 11

8.1. Control parameters

Occupational exposure limits

Magnesium Hydroxide

NIOSH

ACGIH

OSHA

TWA: 15 mg/m³ (total dust)
TLV-TWA: 8-hr : 10 mg/m³ (total dust)
3 mg/m³ (respirable fraction)
TWA: 15 mg/m³ total dust
5 mg/m³ respirable

Zinc Oxide

Malaysia

NIOSH

ACGIH

OSHA

TWA 3 mg/m³ Fume and respirable dust
Ceiling: 15 mg/m³ (total dust)
STEL: 10 mg/m³ (fume)
TWA: 5 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

Malaysia

NIOSH

ACGIH

OSHA

TWA: 5 mg/m³
TWA 8-hr: 10 mg/m³
TWA: 10 mg/m³ dust
0.5 mg/m³ Respirable fraction
TWA: 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

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.

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.

Issue Date: 01/Oct/2020
Print Date: 08/Oct/2020

Revision Number: 1.3
Page 6 of 11

Environmental Exposure Controls

Dispose of in accordance with local regulations. Do not empty into drains or water courses.

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
Initial boiling point	No information available
Freezing Point	No information available
Boiling Point	No information available
Evaporation Rate	Not applicable.
Flammability (solid, gas)	No information available
Upper flammability limit:	
Lower flammability limit:	
Vapor Pressure	No data available
Vapor Density	Not applicable
Relative Density	3.5
Water Solubility	Slightly soluble
Solubility in other solvents	No information available
Partition coefficient	No data available
Autoignition Temperature	No data available
Decomposition Temperature	No information available
Viscosity	No information available.
VOC Content (%)	Not applicable

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

11. TOXICOLOGICAL INFORMATION

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

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.

11.1. Information on toxicological effects

Magnesium Hydroxide

Oral LD50 8500 mg/kg Rat

Zinc Oxide

Oral LD50 7950 mg/kg Rat

Zinc Molybdenum

Oral LD50 >10000 mg/kg Rat
IARC Not Listed

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.
Specific target organ toxicity - Single exposure	No data available.

Issue Date: 01/Oct/2020
Print Date: 08/Oct/2020

Revision Number: 1.3
Page 8 of 11

Specific target organ toxicity - Repeated exposure Not classified.

12. ECOLOGICAL INFORMATION

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

Magnesium Hydroxide

WGK Classification (AwSV) 5209 WGK: nwg

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. Other adverse effects None known

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

Issue Date: 01/Oct/2020
Print Date: 08/Oct/2020Revision Number: 1.3
Page 9 of 11

WGK Classification (AwSV) 2187 WGK: 2

14. TRANSPORT INFORMATION**Mode of Transportation (Road, Water, Air, Rail)**

DOT	UN3077, Environmentally hazardous substances, n.o.s. (Zinc oxide), 9, PG III, Marine Pollutant
ADR	UN3077, Environmentally hazardous substances, n.o.s. (Zinc oxide), 9, PG III, Marine Pollutant
RID	UN3077, Environmentally hazardous substances, n.o.s. (Zinc oxide), 9, PG III, Marine Pollutant
ADN	UN3077, Environmentally hazardous substances, n.o.s. (Zinc oxide), 9, PG III, Marine Pollutant
IATA	UN3077, Environmentally hazardous substances, n.o.s. (Zinc oxide), 9, PG III, Marine Pollutant
IMDG/IMO	UN3077, Environmentally hazardous substances, n.o.s. (Zinc oxide), 9, PG III, Marine Pollutant

14.1. UN number UN3077

14.2. UN proper shipping name Environmentally hazardous substance, solid, n.o.s. Zinc oxide

14.3. Transport hazard class(es) 9

14.4. Packing group III

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. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable**Marine Pollutant**

Issue Date: 01/Oct/2020
Print Date: 08/Oct/2020

Revision Number: 1.3
Page 10 of 11



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	REACH registration number	Australia (AICS)	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	22914-58-5 61583-60-6	245-322-4	01-212080048 1-68-0000	Y: CAS 61583-60-6 (generics)	Y: DSL-229 14-58-5 NDSL: 61583-60-6	Y	(1)-781 (ENCS)(ISHL)	KE-11910	Y: (MO-generics)	Y: CAS 22914-58-5 (generics)	Y	Y	A

Legend

X / Y: Complies ; A: Active ; - / N: Exempt / Not Listed

16. OTHER INFORMATION

Prepared by

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GHS Classification

Hazardous to the aquatic environment - Acute, category 1
Hazardous to the aquatic environment - Chronic, category 1

Physical Hazard

Not classified

Health Hazards

Not classified

Environmental Hazard

Hazardous to the aquatic environment - Acute, category 1
Hazardous to the aquatic environment - Chronic, category 1

HUBER

Safety Data Sheet

Kemgard® HPSS-UF

Issue Date: 01/Oct/2020
Print Date: 08/Oct/2020

Revision Number: 1.3
Page 11 of 11

Labeling

Symbols/Pictograms



Signal Word

Warning

Hazard Statements

H410 - Very toxic to aquatic life with long lasting effects

Training Advice

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

Abbreviations and acronyms

International Agency for Research on Cancer (IARC)
International Air Transport Association (IATA)
International Maritime Dangerous Goods (IMDG)
International Uniform Chemical Information Database (IUCLID)
Workplace Hazardous Materials Information System (WHMIS) status and classification
EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification
DOT (Department of Transportation)
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
TWA - Time-Weighted Average
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA)
The Classification, Labeling and Packaging of Substances and Mixtures (CLP) 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)
Reportable Quantity (RQ) (RQ/% in mixture)
STEL - Short Term Exposure Limit
TLV® - Threshold Limit Value
Derived No Effect Level (DNEL)
SVHC: Substances of Very High Concern for Authorization:
Land transport (ADR/RID)
Biochemical oxygen demand (BOD)
Chemical oxygen demand (COD)
ICAO (air)
(IMDG) International Maritime Dangerous Goods
Positive Pressure Self-Contained Breathing Apparatus (SCBA)
Predicted No Effect Concentration (PNEC)
Globally Harmonized System (GHS)

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End of Safety Data Sheet