



## Kemgard® 620

GHS (Globally Harmonized System)

Measures on the Management of Toxic Chemical Substances Labelling and Safety Data Sheets. December 11, 2014.

Issue Date 25/Jan/2024

Print Date 26/Jan/2024

Revision Number 1.3.4

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### Section 1: Identification: Product identifier and chemical identity

#### 1.1. Product identifier

**Product Name:** Kemgard® 620

**Pure substance/mixture** Mixture

#### Aluminum Hydroxide

**CAS Number** 21645-51-2

**Weight-%** > 75

#### Zinc Molybdenum Oxide

**CAS Number** 22914-58-5

61583-60-6

**Weight-%** < 25

#### 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](http://www.huberadvancedmaterials.com)

**E-mail** [hubermaterials@huber.com](mailto: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

**Pure substance/mixture** Mixture

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**GHS Classification** Considered a hazardous substance or mixture according to the Globally Harmonized System (GHS)

## Hazards identification

**Physical Hazard** 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** May cause damage to organs (kidney) through prolonged or repeated exposure  
Harmful to aquatic life with long lasting effects

## Precautionary Statements

**Prevention** Do not handle until all safety precautions have been read and understood  
Employ good industrial hygiene practice  
Do not breathe dust  
Wear protective gloves/protective clothing/eye protection/face protection  
Avoid release to the environment

**Response** Get medical help 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. Collect spillage.

**Disposal** Dispose of contents/containers in accordance with local regulations. See Section 13: DISPOSAL CONSIDERATIONS.

**2.3. Other hazards** No information available.

## SECTION 3: Composition/information on ingredients

**3.2. Mixture** Mixture

Chemical Name	CAS Number	Taiwan	Taiwan - GHS	EU REACH registration number	Weight-%

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Aluminum Hydroxide	21645-51-2	Y	Not classified	01-2119529246-39	> 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	01-2120800481-68-00 00	< 25

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

<b>General Advice</b>	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.
<b>Eye Contact</b>	In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
<b>Skin Contact</b>	Wash with plenty of soap and water.
<b>Inhalation</b>	Do not breathe dust. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
<b>Ingestion</b>	Rinse mouth thoroughly with water.
<b>Aspiration hazard</b>	Not an expected route of exposure.
<b>Notes to Physician</b>	Treat symptomatically.
<b>4.2. Most important symptoms and effects, both acute and delayed</b>	Dust contact with the eyes can lead to mechanical irritation. Contact with dust can cause mechanical irritation or drying of the skin.
<b>4.3. Indication of any immediate medical attention and special treatment needed</b>	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 (CO<sub>2</sub>).

#### Unsuitable Extinguishing Media

Do not use water jetstream.

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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.

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

## SECTION 8: Exposure controls/personal protection

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## Engineering Controls:

### Exposure Limit Values

#### Aluminum Hydroxide

ACGIH

OSHA

TLV/TWA 8-hr: 1 mg/m<sup>3</sup> (respirable fraction)

TWA: 15 mg/m<sup>3</sup> (Total Dust)

5 mg/m<sup>3</sup> (Respirable Dust)

#### Zinc Molybdenum Oxide

Taiwan

ACGIH

OSHA

OEL: 5 mg/m<sup>3</sup>

TWA: 10 mg/m<sup>3</sup> dust

0.5 mg/m<sup>3</sup> Respirable fraction

TWA: 5 mg/m<sup>3</sup> (respirable); 10 mg/m<sup>3</sup> (dust)

PEL: 5 mg/m<sup>3</sup> (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 Protection

Avoid contact with eyes Wear safety glasses with side shields (or goggles)

### Skin and Body Protection

Use suitable protective clothing, gloves and footwear, selected with regard for use conditions and exposure.

### Hand Protection

Avoid contact

### Respiratory Protection:

Avoid breathing dust. Use NIOSH / OSHA approved respirator where ventilation is not possible and exposure limits for wood dust may be exceeded. In case of exposure to high levels of airborne mist, wear a respirator in compliance with national legislation.  
 EN 149, P2 Half-mask

## Hygiene Measures

Wash off with soap and water. Handle in accordance with good industrial hygiene and safety practice

## Environmental Exposure

This product does not present any particular risk for the environment.  
 Check the appropriate national and local regulations. Prevent entry into sewers and waterways.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### Appearance:

Physical State

Solid Powder

Color

White to off-white

Odor

Odorless

Odor Threshold

No information available

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pH:	8.4 (5% water suspension)
Melting Point / Melting Range	Not applicable
Melting point / Freezing point	Not applicable
Boiling Point	Not applicable
Freezing Point	Not applicable
Flash Point	Non-combustible
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	2.5 – 2.7 g/cm <sup>3</sup> , 20°C
Relative Density	2.6 g/cm <sup>3</sup> , 20° C
Water Solubility	11.7 mg/l , 25° C
Solubility in other solvents	No data available
Partition coefficient	Not applicable
Autoignition Temperature	Not applicable
Decomposition Temperature	No data available
Viscosity	Not applicable.
Kinematic viscosity	Not applicable
Oxidizing Properties	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

### 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 specific hazard known
10.4. Conditions to avoid	Incompatible materials Dust formation
10.5. Incompatible materials	None known
10.6. Hazardous decomposition products	None known

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## SECTION 11: Toxicological information

<b>General Information</b>	Users are advised to consider national Occupational Exposure Limits or other equivalent values.
<b>11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008</b>	
<b>Aluminum Hydroxide</b>	
Oral LD50	> 2000 mg/kg Rat
Inhalation LC50	Rat > 2.3 mg/l (Al <sub>2</sub> O <sub>3</sub> ) Aerosol Maximum attainable concentration
IARC	Not Listed
<b>Zinc Molybdenum Oxide</b>	
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)
<b>Acute Toxicity</b>	No data available
<b>Respiratory Sensitization</b>	Inhalation of dust in high concentration may cause irritation of respiratory system.
<b>Serious eye damage/eye irritation</b>	Dust may cause mechanical irritation to eyes
<b>Skin Corrosion/Irritation</b>	Prolonged or repeated contact may dry skin and cause irritation
<b>Skin Sensitization</b>	Not a skin sensitizer
<b>Mutagenicity</b>	No data available
<b>Reproductive Effects</b>	This product does not contain any known or suspected reproductive hazards.
<b>Carcinogenicity</b>	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
<b>Target Organ Effects</b>	Skin. Eyes. Respiratory system.
<b>Specific target organ toxicity - Single exposure</b>	No data available.
<b>Specific target organ toxicity - Repeated exposure</b>	May cause damage to organs through prolonged or repeated exposure if inhaled. Kidney.
<b>Mixture versus substance information</b>	Mixture
<b>Information on Likely Routes of Exposure</b>	
<b>Inhalation</b>	Avoid inhalation of the product

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<b>Ingestion</b>	Ingestion is not a likely route of exposure
<b>Skin</b>	Prolonged or repeated contact may dry skin and cause irritation
<b>Eyes</b>	Dust contact with the eyes can lead to mechanical irritation
<b>Aspiration hazard</b>	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

### Aluminum Hydroxide

**WGK Classification (AwSV)** 5220 WGK: nwg

**12.2. Persistence and degradability** No data available.

**12.3. Bioaccumulative potential** No data available.

**Partition coefficient** Not applicable

**Bioconcentration factor (BCF)** No data available.

**12.4. Mobility in soil** No data available.

**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



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<b>Disposal Methods</b>	Disposal should be in accordance with applicable regional, national and local laws and regulations.
<b>Contaminated Packaging</b>	Product residue may remain in empty containers. Empty containers should be taken to an approved waste handling site for recycling or disposal.
<b>Waste codes</b>	Waste codes should be assigned by the user based on the application for which the product was used

## Aluminum Hydroxide

<b>European Waste Catalog</b>	060299
<b>WGK Classification (AwSV)</b>	5220 WGK: nwg

## SECTION 14: Transport information

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

<b>TDG -Canada</b>	Not regulated
<b>DOT</b>	Not regulated
<b>ADR</b>	Not regulated
<b>RID</b>	Not regulated
<b>IATA</b>	Not regulated
<b>IMDG/IMO</b>	Not regulated
<b>ICAO</b>	Not regulated

<b>14.1. UN number</b>	None
<b>14.2. UN proper shipping name</b>	None
<b>14.3. Transport hazard class(es)</b>	None
<b>Subsidiary Risk</b>	-
<b>14.4. Packing group</b>	None
<b>14.5. Environmental hazards</b>	No
<b>14.6. Special precautions for user</b>	Not applicable
<b>14.7. Maritime transport in bulk according to IMO instruments</b>	Not applicable

## SECTION 15: Regulatory information

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## Global Inventories

Chemical Name	CAS Number	EC No	EU REACH registration number	Australia (AIIIC)	Canada (DSL)	China (IECSC)	Japan	S. Korea (KECL)	Mexico	New Zealand	Philippines (PICCS)	Taiwan	TSCA: United States
Aluminum Hydroxide	21645-51-2	244-492-7	01-211952 9246-39	Y	Y	Y	(1)-17 (ENCS); ISHL	KE-00980	Y	Y	Y	Y	A
Zinc Molybdenum Oxide	22914-58-5 61583-60-6	245-322-4	01-212080 0481-68-0 000	N	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	A

## SECTION 16: Other information

### Prepared by

Huber Engineered Materials Global Regulatory Affairs  
email: regulatory.affairs@huber.com.

### Company:

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Atlanta, GA 30339 USA  
Tel: +1 678 247-7300.

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### GHS Classification

Considered a hazardous substance or mixture according to the Globally Harmonized System (GHS)

### Symbols/Pictograms



### Signal Word

Warning

### Hazard Statements

May cause damage to organs (kidney) through prolonged or repeated exposure  
Harmful to aquatic life with long lasting effects

### Hazards identification

#### Physical Hazard

Not classified

#### Health Hazards

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

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Chronic Aquatic Toxicity Category 3

**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  
GHS (Globally Harmonized System)  
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**