



Kemgard® 605

GHS (Globally Harmonized System)

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

Issue Date 01/Jan/2024

Print Date 14/Dec/2023

Revision Number 1.2.1

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Section 1: Identification: Product identifier and chemical identity

1.1. Product identifier

Product Name: Kemgard® 605

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 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 Miller Chemical and Fertilizer, LLC
120 Radio Rd
Hanover, PA 17331
Tel.: 717-632-8921
Fax.: 717-646-1104

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

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2.1. Classification of the substance or mixture

Pure substance/mixture

Mixture

GHS Classification

This product is not classified as hazardous according to the UN GHS guideline and labeling is not required

Hazards identification

Physical Hazard

Not classified

Health Hazards

Not classified

Environmental Hazard

Chronic Aquatic Toxicity Category 3

2.2. Label elements

Symbols/Pictograms

Signal Word

None

Hazard Statements

Harmful to aquatic life with long lasting effects

Precautionary Statements

Prevention

Avoid release to the environment
Employ good industrial hygiene practice
Wash hands thoroughly after handling
Do not handle until all safety precautions have been read and understood
Take precautionary measures against static discharges

Response

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

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-%
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

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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 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	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

None known.

5.2. Special hazards arising from the substance or mixture

Non-combustible.

5.3. Advice for firefighters

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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. Avoid dust formation. Ensure adequate ventilation. 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 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

Engineering Controls:

Exposure Limit Values Aluminum Hydroxide

ACGIH

TLV/TWA 8-hr: 1 mg/m³ (respirable fraction)

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OSHA

TWA: 15 mg/m³ (Total Dust)
5 mg/m³ (Respirable Dust)

Zinc Molybdenum Oxide

Taiwan

ACGIH

OEL: 5 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)

OSHA

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

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

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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 ³ , 20°C
Relative Density	2.6 g/cm ³ , 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

SECTION 11: Toxicological information

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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

Aluminum Hydroxide

Oral LD50

> 2000 mg/kg Rat

Inhalation LC50

Rat > 2.3 mg/l (Al₂O₃) Aerosol Maximum attainable concentration

IARC

Not Listed

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 No data available

Respiratory Sensitization Inhalation of dust in high concentration may cause irritation of respiratory system.

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

Skin Corrosion/Irritation Prolonged or repeated contact may dry skin and cause irritation

Skin Sensitization Not a skin sensitizer

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.

Mixture versus substance information Mixture

Information on Likely Routes of Exposure

Inhalation Inhalation of dust may cause irritation of the respiratory system

Ingestion Ingestion is not a likely route of exposure

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

Eyes Dust contact with the eyes can lead to mechanical irritation

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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

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

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.

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Waste codes

Waste codes should be assigned by the user based on the application for which the product was used

Aluminum Hydroxide

European Waste Catalog 060299

WGK Classification (AwSV) 5220 WGK: nwg

SECTION 14: Transport information

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

TDG -Canada	Not regulated
DOT	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated
ICAO	Not regulated

14.1. UN number None

14.2. UN proper shipping name None

14.3. Transport hazard class(es) None

Subsidiary Risk -

14.4. Packing group None

14.5. Environmental hazards No

14.6. Special precautions for user Not applicable

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

SECTION 15: Regulatory information

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
Aluminum Hydroxide	21645-51-2	244-492-7	01-211952 9246-39	Y	Y	Y	(1)-17 (ENCS);	KE-00980	Y	Y	Y	Y	A

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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	ISHL (1)-781 (ENCS)(IS HL)	KE-11910	Y: (MO-gene rics)	Y	Y	Y	A
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X / Y: Complies ; A: Active ; - / N: Exempt / Not Listed

SECTION 16: Other information

Prepared by	Huber Engineered Materials Global Regulatory Affairs email: regulatory.affairs@huber.com.
Company:	J.M. Huber Corporation 3100 Cumberland Boulevard, Suite 600 Atlanta, GA 30339 USA Tel: +1 678 247-7300.
Issue Date	01/Jan/2024
GHS Classification	This product is not classified as hazardous according to the UN GHS guideline and labeling is not required
Symbols/Pictograms	None
Signal Word	None
Hazard Statements	Harmful to aquatic life with long lasting effects
Hazards identification	
Physical Hazard	Not classified
Health Hazards	Not classified
Environmental Hazard	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)

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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