Safety Data Sheet

Malaysia CLASS Regulation, 2013
GHS (Globally Harmonized System)

Issue Date 01/Jan/2024 **Revision Number** 1.2.1
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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

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

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

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or 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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture Mixture

Chemical Name	CAS Number	TSCA: United States	EU REACH registration number	Weight-%
Aluminum Hydroxide	21645-51-2	A	01-2119529246-39	> 75
Zinc Molybdenum Oxide	22914-58-5 61583-60-6	A	01-2120800481-68-0000	< 25

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

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.
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	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.

5. FIRE-FIGHTING 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

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.

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.

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

8.1. Control parameters

Occupational exposure limits

Aluminum Hydroxide

NIOSH	TWA: 5 mg/m³ (respirable dust); 10 mg/m³ TWA (total dust)
ACGIH	TLV/TWA 8-hr: 1 mg/m³ (respirable fraction)
OSHA	TWA: 15 mg/m³ (Total Dust) 5 mg/m³ (Respirable Dust)

Zinc Molybdenum Oxide

Malaysia	TWA: 5 mg/m³
NIOSH	8-hr TWA: 10 mg/m³
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)

Biological Limit Values	None
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	Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use.
Environmental Exposure Controls	Dispose of in accordance with local regulations.

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
Freezing Point	Not applicable
Boiling 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
Density	2.5 – 2.7 g/cm3, 20ºC

Relative Density	2.6 g/cm3, 20º 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.

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

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	Inhalation of dust may cause irritation of the respiratory system
Skin	Contact with dust can cause mechanical irritation or drying of the skin
Eyes	Dust contact with the eyes can lead to mechanical irritation
Ingestion	Ingestion is not a likely route of exposure
Aspiration hazard	Not an expected route of exposure.

11.1. Information on toxicological effects

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
Specific target organ toxicity - Repeated exposure	Kidney (based on tubular degeneration/regeneration of male Han Wistar rats at 125 mg/kg/day). NOAEL – 60 mg/kg Rat; Oral; 90-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

12. ECOLOGICAL INFORMATION

12.1. Ecotoxicity 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. Other adverse effects	No information available

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.
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

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

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 (AIIC)	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	01-2119529246-39	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	01-2120800481-68-0000	N	Y	Y	(1)-781 (ENCS)(ISHL)	KE-11910	N	N	N	Y	A

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

16. OTHER INFORMATION

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

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

Physical Hazard Not classified

Health Hazards Not classified

Environmental Hazard Chronic Aquatic Toxicity Category 3

Labeling

Symbols/Pictograms	
Signal Word	None
Hazard Statements	Harmful to aquatic life with long lasting effects
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)

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End of Safety Data Sheet