



**Kemgard® 605**

Prepared in accordance with GB/T 16483-2008, GB/T 24774-2009, GB 13690 – 2009, GB/T 17519–2013  
GHS (Globally Harmonized System)

Issue Date 09/Apr/2024  
Print Date 09/Apr/2024

Revision Number 1.2.3  
Page 1 of 10

**Section 1: PRODUCT AND COMPANY IDENTIFICATION**

**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

**Recommended Use** Smoke suppressant

**Uses advised against** None known

**Company:** J.M. Huber Corporation  
3100 Cumberland Boulevard, Suite 600  
Atlanta, GA 30339 USA  
Tel: +1 678 247-7300

**Emergency Telephone** CHEMTREC China: 4001-204937 (Mandarin)  
Local call: +86 532 5879 2008

**E-mail** hubermaterials@huber.com

**Internet** www.huberadvancedmaterials.com

**Section 2: HAZARDS IDENTIFICATION**

**GHS Classification** Not classified

**Physical Hazard** Not classified

**Health Hazard** Acute toxicity - Inhalation Category 5

**Environmental Hazard** Acute Aquatic Toxicity Category 2  
Chronic Aquatic Toxicity, Category 3

**Label Elements**

**Symbols/Pictograms** None

# Safety Data Sheet

Kemgard® 605

Issue Date 09/Apr/2024

Print Date 09/Apr/2024

Revision Number 1.2.3

Page 2 of 10

**Signal Word** Warning

**Hazard Statement** May be harmful if inhaled  
Toxic to aquatic life  
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

**Response** IF INHALED: Get medical help.

**Spills and Leaks** Collect spillage

**Storage** Store in a dry place  
Store away from incompatible materials.

**Disposal** Disposal should be in accordance with applicable regional, national and local laws and regulations

**General Advice** None

## Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture

Mixture

Chemical Name	CAS Number	China (IECSC)	China classification	TSCA: United States	EU REACH registration number	Weight-%
Aluminum Hydroxide	21645-51-2	Y	Not classified	A	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	A	01-2120800481-68 -0000	< 25

## Section 4: FIRST AID MEASURES

**General Advice** None

**Eye Contact** Hold eyelids apart and flush eyes with a steady, gentle stream of water for several minutes.

**Skin Contact** IF ON SKIN: Wash with plenty of soap and water

# Safety Data Sheet

**Kemgard® 605****Issue Date** 09/Apr/2024**Print Date** 09/Apr/2024**Revision Number** 1.2.3**Page** 3 of 10

<b>Inhalation</b>	If symptoms occur, remove person to fresh air.
<b>Ingestion</b>	Do not induce vomiting without medical advice
<b>Notes to Physician</b>	Treat symptomatically
<b>Personal Protective Equipment For First Aid Responders</b>	Wear suitable protective clothing IF exposed or concerned: Get medical advice/attention
<b>Expected acute symptoms and delayed symptoms</b>	None known

## Section 5: FIRE FIGHTING MEASURES

<b>Flammable Properties</b>	None known
<b>Suitable Extinguishing Media</b>	All extinguishing media can be used. Use suitable media appropriate for the surrounding fire.
<b>Unsuitable extinguishing media:</b>	None known
<b>Specific Hazards Arising from the Chemical</b>	None known
<b>Unusual fire &amp; explosion hazards:</b>	None
<b>Protective measures:</b>	Use protective equipment that is appropriate for surrounding materials.
<b>Protective Equipment and Precautions for Firefighters</b>	Wear self-contained breathing apparatus and protective suit

## Section 6: SPILLAGE, ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Ensure adequate ventilation
<b>Environmental Precautions</b>	Prevent from entering into soil, ditches, sewers and waterways.
<b>Methods for cleaning up</b>	Sweep or vacuum spilled material Transfer the material to appropriate containers for reclamation or disposal
<b>Other Information:</b>	None known

## Section 7: HANDLING AND STORAGE

<b>Handling</b>	Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and
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# Safety Data Sheet

**Kemgard® 605**

Issue Date 09/Apr/2024

Print Date 09/Apr/2024

Revision Number 1.2.3

Page 4 of 10

accumulation. Do not breathe dust. Ensure adequate ventilation. Wear appropriate personal protective clothing to prevent skin contact. Handle in accordance with good industrial hygiene and safety practice.

## Storage

Keep containers tightly closed.  
Dry storage.  
Store away from incompatible materials.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Limits

Provide adequate ventilation as well as local exhaust at critical locations

#### Aluminum Hydroxide

ACGIH

NIOSH

OSHA

TLV/TWA 8-hr: 1 mg/m<sup>3</sup> (respirable fraction)  
TWA: 5 mg/m<sup>3</sup> (respirable dust); 10 mg/m<sup>3</sup> TWA (total dust)  
TWA: 15 mg/m<sup>3</sup> (Total Dust)  
5 mg/m<sup>3</sup> (Respirable Dust)

#### Zinc Molybdenum Oxide

China

China

ACGIH

NIOSH

OSHA

TWA: 8-hour: 4 mg/m<sup>3</sup>  
STEL: Not established  
TWA: 10 mg/m<sup>3</sup> dust  
0.5 mg/m<sup>3</sup> Respirable fraction  
8-hr TWA: 10 mg/m<sup>3</sup>  
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/Face Protection

Wear safety glasses with side shields (or goggles)

#### Skin and Body Protection

Wear suitable protective clothing

#### Hand Protection

Protective gloves

#### Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

#### Hygiene Measures

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

### Environmental Exposure Controls

Dispose of in accordance with local regulations

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

# Safety Data Sheet

Kemgard® 605

Issue Date 09/Apr/2024

Print Date 09/Apr/2024

Revision Number 1.2.3

Page 5 of 10

## Information on basic physical and chemical properties

### Appearance:

<b>Physical State</b>	Solid Powder
<b>Color</b>	White to off-white
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	No information available
<b>pH:</b>	8.4 (5% water suspension)
<b>Melting Point / Melting Range</b>	Not applicable
<b>Freezing Point</b>	Not applicable
<b>Boiling Point</b>	Not applicable
<b>Flash Point</b>	Non-combustible.
<b>Evaporation Rate</b>	Not applicable
<b>Flammability (solid, gas)</b>	Not applicable
<b>Upper flammability limit:</b>	
<b>Lower flammability limit:</b>	
<b>Vapor Pressure</b>	Not applicable
<b>Vapor Density</b>	Not applicable
<b>Density</b>	2.5 – 2.7 g/cm <sup>3</sup> , 20°C
<b>Relative Density</b>	2.6 g/cm <sup>3</sup> , 20° C
<b>Water Solubility</b>	11.7 mg/l , 25° C
<b>Solubility in other solvents</b>	No data available
<b>Partition coefficient</b>	Not applicable
<b>Autoignition Temperature</b>	Not applicable
<b>Decomposition Temperature</b>	No data available
<b>Viscosity</b>	Not applicable.

## Section 10: STABILITY AND REACTIVITY

<b>Stability</b>	Stable
<b>Conditions to avoid:</b>	Dust formation Incompatible materials
<b>Incompatible materials</b>	None known
<b>Hazardous decomposition products</b>	None known
<b>Hazardous Reactions</b>	None under normal processing
<b>Hazardous polymerization:</b>	None under normal processing

## Section 11: TOXICOLOGICAL INFORMATION

# Safety Data Sheet

**Kemgard® 605**

Issue Date 09/Apr/2024

Print Date 09/Apr/2024

Revision Number 1.2.3

Page 6 of 10

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

## Product Information

### Information on Likely Routes of Exposure

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

### 11.1. Information on toxicological effects

#### Aluminum Hydroxide

<b>Oral LD50</b>	> 2000 mg/kg Rat
<b>Inhalation LC50</b>	Rat > 2.3 mg/l (Al <sub>2</sub> O <sub>3</sub> ) Aerosol Maximum attainable concentration
<b>IARC</b>	Not Listed

#### Zinc Molybdenum Oxide

<b>Oral LD50</b>	>10000 mg/kg Rat
<b>IARC</b>	Not Listed
<b>Specific target organ toxicity - Repeated exposure</b>	Kidney (based on tubular degeneration/regeneration of male Han Wistar rats at 125 mg/kg/day). NOAEL – 60 mg/kg Rat; Oral; 90-day.

<b>Acute Toxicity</b>	No data available
<b>Serious eye damage/eye irritation</b>	Dust may cause mechanical irritation to eyes
<b>Respiratory Sensitization</b>	Inhalation of dust in high concentration may cause irritation of respiratory system.
<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>	No data available.
<b>Specific target organ toxicity - Single exposure</b>	No data available.
<b>Specific target organ toxicity -</b>	No data available.

# Safety Data Sheet

Kemgard® 605

Issue Date 09/Apr/2024

Print Date 09/Apr/2024

Revision Number 1.2.3

Page 7 of 10

**Repeated exposure****Mixture versus substance information** Mixture.

## Section 12: ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	Harmful to aquatic life with long lasting effects.
<b>Persistence/Degradability:</b>	No data available.
<b>Bioaccumulative Potential</b>	This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).
<b>Partition coefficient</b>	Not applicable
<b>Bioconcentration factor (BCF)</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Results of PBT and vPvB assessment</b>	This substance does not meet the criteria for classification as PBT or vPvB.
<b>Other Adverse Effects</b>	None known

## Section 13: DISPOSAL CONSIDERATIONS

<b>Waste from Residues/Unused Products</b>	Dispose of in accordance with local regulations
<b>Contaminated Packaging:</b>	Dispose of container and unused contents in accordance with federal, state and local requirements

## Section 14: TRANSPORT INFORMATION

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

<b>DOT</b>	Not regulated
<b>IATA</b>	Not regulated
<b>IMDG/IMO</b>	Not regulated
<b>ICAO</b>	Not regulated

# Safety Data Sheet

Kemgard® 605

Issue Date 09/Apr/2024

Print Date 09/Apr/2024

Revision Number 1.2.3

Page 8 of 10

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

## Section 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 (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	01-211952924-6-39	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	01-212080048-1-68-0000	N	Y	Y	(1)-781 (ENCS)(ISHL)	KE-11910	N	N	N	Y	A

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



# Safety Data Sheet

Kemgard® 605

Issue Date 09/Apr/2024

Print Date 09/Apr/2024

Revision Number 1.2.3

Page 9 of 10

## Section 16: OTHER INFORMATION

<b>Prepared by</b>	Huber Engineered Materials Global Regulatory Affairs email: regulatory.affairs@huber.com
<b>Reason for Revision</b>	GB/T 16483-2008 GB/T 24774-2009 GB 13690 – 2009 GB/T 17519–2013
<b>GHS Classification</b>	Not classified
<b>Physical Hazard</b>	Not classified
<b>Health Hazard</b>	Acute toxicity - Inhalation Category 5
<b>Environmental Hazard</b>	Acute Aquatic Toxicity Category 2 Chronic Aquatic Toxicity, Category 3
<b>Label Elements</b>	
<b>Symbols/Pictograms</b>	None
<b>Signal Word</b>	Warning
<b>Hazard Statement</b>	May be harmful if inhaled Toxic to aquatic life Harmful to aquatic life with long lasting effects
<b>Abbreviations and acronyms</b>	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) SCBA (Self-Contained Breathing Apparatus) Positive Pressure

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# Safety Data Sheet

**Kemgard® 605**

**Issue Date** 09/Apr/2024

**Print Date** 09/Apr/2024

**Revision Number** 1.2.3

**Page 10 of 10**

GHS (Globally Harmonized System)

ADR (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

RID (Agreement Concerning the International Carriage of Dangerous Goods by Rail)

SARA (Superfund Amendments and Reauthorization Act of 1986)

TSCA (Toxic Substances Control Act)

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**End of Safety Data Sheet**