



FIRE RETARDANT ADDITIVES

# Safety Data Sheet

## Kemgard® 981-UF

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03  
Canadian Workplace Hazardous Material Information System (WHMIS) 2015  
Mexico NOM-018-STPS-2000; NOM-018-STPS-2015  
Globally Harmonized System (GHS)

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

Product Name: Kemgard® 981-UF

Pure substance/mixture Mixture

### 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](http://www.hubermaterials.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

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

Physical Hazards Not classified

Health Hazards Not classified

Environmental Hazard Hazardous to the aquatic environment - Acute, category 1

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Hazardous to the aquatic environment - Chronic, category 1

### 2.2. Label elements

#### Symbols/Pictograms



#### Signal Word

Warning

#### Hazard Statements

Very toxic 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  
Wash hands thoroughly after handling  
Avoid release to the environment

##### 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  
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing

##### Storage

Keep in a dry place  
Store away from incompatible materials

##### Disposal

Disposal should be in accordance with applicable regional, national and local laws and regulations  
Do not allow to enter into surface water or drains

**Hazards not otherwise classified (HNOC)** None known.

**SECTION 3: Composition/information on ingredients****Pure substance/mixture**

Mixture

Chemical Name	CAS Number	TSCA: United States	Canada (DSL)	Mexico	REACH registration number	OSHA Regulatory Status	WHMIS	Weight-%
Zinc Oxide	1314-13-2	A	Y	Y	01-211946388 1-32	Not classified	--	>25
Zinc Phosphate	7779-90-0	A	Y	Zinc salts	01-211948504 4-40	Not classified	--	>25

**Legend**

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

**SECTION 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.

**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**

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.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable Extinguishing**

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**Media**

Water spray (fog). Foam. Dry chemical. Carbon dioxide (CO<sub>2</sub>).

**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.

## 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. 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.

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**7.2. Conditions for safe storage,** Keep container tightly closed and dry. Store away from incompatible materials, including any incompatibilities

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

##### Zinc Oxide

OSHA	PEL: 15 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> (respirable fraction)
ACGIH	STEL: 10 mg/m <sup>3</sup> (respirable) TWA: 2 mg/m <sup>3</sup> (respirable)
NIOSH	Ceiling: 15 mg/m <sup>3</sup> (total dust) STEL: 10 mg/m <sup>3</sup> (fume) TWA: 5 mg/m <sup>3</sup> (total dust)
Mexico	5 mg/3

##### Zinc Phosphate

OSHA	15 mg/m <sup>3</sup> Total Dust 5 mg/m <sup>3</sup> Respirable Dust
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**Biological Limit Values:** No information available

**Derived No Effect Level (DNEL)** No data available

**Predicted No Effect Concentration (PNEC)** No information available

### 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

<b>Eye/Face Protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin and Body Protection</b>	Wear suitable protective clothing.
<b>Hand protection</b>	For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn.
<b>Hand Protection</b>	For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn.
<b>Respiratory Protection</b>	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

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<b>Thermal hazards</b>	None known. Wear suitable protective clothing.
<b>Hygiene Measures</b>	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.
<b>Environmental Exposure Controls</b>	Dispose of in accordance with local regulations. Do not empty into drains or water courses.

## SECTION 9: Physical and chemical properties

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

**Appearance:**

<b>Physical State</b>	Solid Powder
<b>Color</b>	White
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	No information available
<b>pH:</b>	6.5 (5% water suspension)
<b>Melting Point / Melting Range</b>	Not applicable
<b>Boiling Point</b>	No information available
<b>Freezing Point</b>	Not applicable
<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 Density</b>	Not applicable
<b>Relative Density</b>	
<b>Water Solubility</b>	Slightly soluble
<b>Solubility in other solvents</b>	
<b>Partition coefficient</b>	
<b>Autoignition Temperature</b>	Not applicable
<b>Specific Gravity</b>	4.2 g/cm <sup>3</sup> , 20° C
<b>VOC Content (%)</b>	Not applicable

## SECTION 10: Stability and reactivity

<b>10.1. Reactivity</b>	Stable under normal conditions
<b>10.2. Chemical stability</b>	Stable under normal conditions
<b>10.3. Possibility of hazardous reactions</b>	None under normal processing
<b>10.4. Conditions to avoid</b>	Dust formation Incompatible materials
<b>10.5. Incompatible materials</b>	Strong oxidizing agents

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10.6. Hazardous decomposition products None known

## SECTION 11: Toxicological information

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

### Information on Likely Routes of Exposure

<b>Inhalation</b>	May cause respiratory tract irritation
<b>Skin</b>	No known hazard in contact with skin
<b>Eyes</b>	Dust contact with the eyes can lead to mechanical irritation
<b>Ingestion</b>	Ingestion is not a likely route of exposure
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Dust may cause mechanical irritation to eyes.

### 11.1. Information on toxicological effects

#### Zinc Oxide

**LD50s and LC50s** 5000 mg/kg Oral LD50 Rat

**Oral LD50** 7950 mg/kg Rat

#### Zinc Phosphate

**LD50s and LC50s** 5000 mg/kg Oral LD50 Rat  
**Oral LD50** > 5000 mg/kg Rat

<b>Acute Toxicity</b>	Low hazard for usual industrial or commercial handling
<b>Chronic Toxicity</b>	No data available.
<b>Chronic Effects</b>	No data available.
<b>Respiratory Sensitization</b>	Does not cause sensitization
<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 information available

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<b>Germ cell mutagenicity</b>	No information 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>	Not classified.
<b>Specific target organ toxicity - Repeated exposure</b>	Not classified.

## SECTION 12: Ecological information

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

### Zinc Oxide

**WGK Classification (AwSV)** 2187 WGK: 2

### Zinc Phosphate

**Germany - Water Classification (AwSV) - Annex 3:** 5067 hazard class 2 - hazard to waters

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

**12.3. Bioaccumulative potential** 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** No information available

## SECTION 13: Disposal considerations

### **13.1. Waste treatment methods**

**Disposal Methods** Dispose of waste product or used containers according to local regulations. Do not

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allow to enter into surface water or drains.

**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

**Zinc Oxide**

**WGK Classification (AwSV)** 2187 WGK: 2

## SECTION 14: Transport information

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

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

**14.3. Transport hazard class(es)** 9

**Subsidiary Risk** -

**14.4. Packing group** III

**14.5. Environmental hazards** Yes : Marine Pollutant

**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**

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Marine Pollutant



## SECTION 15: Regulatory information

### Global Inventories

#### Pure substance/mixture

#### Mixture

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
Zinc Oxide	1314-13-2	215-222-5	01-211946 3881-32	Y	Y	Y	ENCS: (1)-561 ISHL: (1)-561	KE-35565	Y	Y	Y	Y	A
Zinc Phosphate	7779-90-0	231-944-3 *	01-211948 5044-40	Y	Y	Y	(1)-526 (ENCS) (1)-1181 (ENCS)	KE-34945	Zinc salts	Y	Y	Y	A

#### Legend

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

### US Federal Regulations

#### EPA

Zinc Oxide  
SARA 313

Yes

### U.S. State Right-to-Know Regulations

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Chemical Name	CAS Number	California Proposition 65	Massachusetts	Minnesota	New Jersey	Pennsylvania
Zinc Oxide	1314-13-2		Y	Y	Y	Y
Zinc Phosphate	7779-90-0					

### California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

This product does not contain any Proposition 65 chemicals

### CANADA

#### WHMIS:

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR

## SECTION 16: Other information

Prepared by	Huber Engineered Materials (HEM) Global Regulatory Affairs regulatory.affairs@huber.com
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Reason for Version	OSHA (Occupational Safety and Health Administration of the US Department of Labor).
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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### Disclaimer

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**End of Safety Data Sheet**