



**Kemgard® 981**

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  
GHS (Globally Harmonized System)

**Issue Date** 01/Jan/2024  
**Print Date** 14/Dec/2023

**Revision Number** 1.4.1  
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## **SECTION 1: Identification of the substance/mixture and of the company/undertaking**

### **1.1. Product identifier**

**Product Name:** Kemgard® 981

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

**Contact E-Mail** [www.huberadvancedmaterials.com/contact](http://www.huberadvancedmaterials.com/contact)

**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**

**Physical Hazards** Not classified

**Health Hazards** Not classified

**Environmental Hazard** Acute Aquatic Toxicity: Category 1  
Chronic Aquatic Toxicity: Category 1

### **2.2. Label elements**

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## Symbols/Pictograms

**Signal Word**

Warning

**Hazard Statements**

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

## Precautionary Statements

**Prevention**

P202 - Do not handle until all safety precautions have been read and understood

P273 - Avoid release to the environment

**Response**

P391 - Collect spillage

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water [or shower]

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

**Storage**

Store away from incompatible materials

**Disposal**

P501 - Dispose of contents/containers in accordance with local regulations

Hazards not otherwise classified None known.  
(HNOC)

## SECTION 3: Composition/information on ingredients

Pure substance/mixture

Mixture

Chemical Name	CAS Number	Weight-%
Zinc Oxide	1314-13-2	>25
Zinc Phosphate	7779-90-0	>25

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

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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**

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 INHALED: Remove 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 Media**

Water spray (fog). Dry chemical. Foam. 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.

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## 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. 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.

**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

### 8.1. Control parameters

#### Occupational exposure limits

##### Zinc Oxide

OSHA

ACGIH

PEL: 15 mg/m<sup>3</sup> (total dust)  
5 mg/m<sup>3</sup> (respirable fraction)  
STEL: 10 mg/m<sup>3</sup> (respirable)  
TWA: 2 mg/m<sup>3</sup> (respirable)

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NIOSH

Ceiling: 15 mg/m<sup>3</sup> (total dust)STEL: 10 m/m<sup>3</sup> (fume)TWA: 5 mg/m<sup>3</sup> (total dust)Canada - British Columbia - OEL-  
STELs10 mg/m<sup>3</sup>

Canada - Ontario - OEL - STEVs

10 mg/m<sup>3</sup> STEV

Canada - Ontario - OEL - TWA EVs

2 mg/m<sup>3</sup>**Zinc Phosphate**

OSHA

15 mg/m<sup>3</sup> Total Dust5 mg/m<sup>3</sup> Respirable Dust**PNEC (Predicted No Effect  
Concentration)**

No information available

**DNEL (Derived No Effect Level)**

No data available

**Biological Limit Values**

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****Eye/Face Protection**

Wear safety glasses with side shields (or goggles).

**Skin and Body Protection**

Wear suitable protective clothing.

**Hand Protection**

For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn.

**Respiratory Protection**

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

**Thermal hazards**

None known. Wear suitable protective clothing.

**Hygiene Measures**

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.

**Environmental Exposure  
Controls**

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:****Physical State**  
**Color**Solid Powder  
White

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<b>Odor</b>	Odorless
<b>Odor Threshold</b>	No information available
<b>pH:</b>	6.5
<b>Melting Point / Melting Range</b>	Not applicable
<b>Melting point / Freezing point</b>	Not applicable
<b>Boiling Point</b>	No information available
<b>Freezing Point</b>	Not applicable
<b>Flash Point</b>	Not determined
<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>Vapor Density</b>	Not applicable
<b>Density</b>	No data available
<b>Relative Density</b>	
<b>Water Solubility</b>	Slightly soluble
<b>Partition coefficient</b>	No information available
<b>Autoignition Temperature</b>	Not applicable
<b>Decomposition Temperature</b>	No data available
<b>Viscosity</b>	No information available.
<b>Kinematic viscosity</b>	Not applicable
<b>Oxidizing Properties</b>	Not applicable
<b>Particle Size</b>	No information available
<b>Specific Gravity</b>	4.2 g/cm <sup>3</sup> , 20° C
<b>VOC Content (%)</b>	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

<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
<b>10.6. Hazardous decomposition products</b>	None known

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## SECTION 11: Toxicological information

### General Information

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

### 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

&gt; 5000 mg/kg Rat

### Acute Toxicity

Low hazard for usual industrial or commercial handling

### Chronic Toxicity

No data available.

### Chronic Effects

No data available.

### Respiratory Sensitization

Does not cause sensitization

### 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 information available

### Germ cell mutagenicity

No information 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

Not classified.

### Specific target organ toxicity - Repeated exposure

Not classified.

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<b>Inhalation</b>	May cause respiratory tract irritation
<b>Ingestion</b>	Ingestion is not a likely route of exposure
<b>Skin</b>	No known hazard in contact with skin
<b>Eyes</b>	Dust contact with the eyes can lead to mechanical irritation
<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.

**11.2. Information on other hazards**

<b>11.2.1. Endocrine disrupting properties</b>	This product does not contain any known or suspected endocrine disruptors
<b>11.2.2. Other information</b>	Not applicable

## SECTION 12: Ecological information

<b>12.1. Toxicity</b>	Very toxic to aquatic life with long lasting effects
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**Zinc Oxide****WGK Classification (AwSV)** 2187 WGK: 2**Zinc Phosphate****Germany - Water Classification (AwSV) - Annex 3:** 5067 hazard class 2 - hazard to waters

<b>12.2. Persistence and degradability</b>	No data available.
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<b>12.3. Bioaccumulative potential</b>	No data available.
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<b>Bioconcentration factor (BCF)</b>	No data available.
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<b>12.4. Mobility in soil</b>	No data available.
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<b>12.5. Results of PBT and vPvB assessment</b>	This substance does not meet the criteria for classification as PBT or vPvB.
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<b>12.6. Endocrine disrupting properties</b>	This product does not contain any known or suspected endocrine disruptors
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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

<b>Disposal Methods</b>	Dispose of waste product or used containers according to local regulations. Do not allow to enter into surface water or drains.
<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

#### Zinc Oxide

WGK Classification (AwSV) 2187 WGK: 2

## SECTION 14: Transport information

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

<b>TDG -Canada</b>	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Zinc oxide, Zinc phosphate)
<b>DOT</b>	Not regulated in non-bulk packages (<119 gal), , UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Zinc oxide, Zinc phosphate)
<b>ADR</b>	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Zinc oxide, Zinc phosphate)
<b>RID</b>	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Zinc oxide, Zinc phosphate)
<b>ADN</b>	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Zinc oxide, Zinc phosphate)
<b>IATA</b>	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Zinc oxide, Zinc phosphate)
<b>IMDG/IMO</b>	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Zinc oxide, Zinc phosphate)
<b>ICAO</b>	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Zinc oxide, Zinc phosphate)

14.1. UN number UN3077

14.2. UN proper shipping name UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Zinc oxide, Zinc phosphate)

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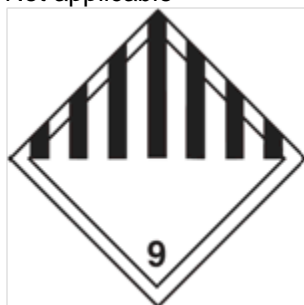
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**14.3. Transport hazard class(es)** 9

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. Maritime transport in bulk according to IMO instruments**

Not applicable

**Marine Pollutant**

## SECTION 15: Regulatory information

**Global Inventories****Pure substance/mixture**

Mixture

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
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

HUBER

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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
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## US Federal Regulations

### EPA

**Zinc Oxide**  
SARA 313

Listed

### CAA (Clean Air Act)

The components of this product are not regulated under any of the following sections of the Clean Air Act: Section 112 Hazardous Air Pollutants, Section 112 Statutory Air Pollutants, Section 112 High-Risk Pollutants, Section 112(r) Accidental Release Prevention Substances or Section 602 Ozone Depleting Substance. As a powder product, it would be regulated under Section 109 Criteria Pollutants particulates.

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

Chemical Name	CAS Number	California Proposition 65	Massachusetts	Minnesota	New Jersey	Pennsylvania
Zinc Oxide	1314-13-2	N	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 Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

## 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

IARC (International Agency for Research on Cancer)  
IATA (International Air Transport Association)  
IMDG (International Maritime Dangerous Goods)

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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**