



**Kemgard® 981**

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 01/Jan/2024

Print Date 14/Dec/2023

Revision Number 1.4.1

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## Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Kemgard® 981
Pure substance/mixture	Mixture
<u>Zinc Oxide</u>	
CAS Number	1314-13-2
Weight-%	>25
<u>Zinc Phosphate</u>	
CAS Number	7779-90-0
Weight-%	>25
Recommended Use	Flame retardant 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
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## Section 2: HAZARDS IDENTIFICATION

### GHS Classification

Physical Hazard	Not classified
Health Hazard	Not classified
Environmental Hazard	Acute Aquatic Toxicity Category 1 Chronic Aquatic Toxicity Category 1

### Label Elements

Symbols/Pictograms

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**Signal Word**

Warning

**Hazard Statement**

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**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**Spills and Leaks**

P391 - Collect spillage

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

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

**General Advice**

In case of doubt or when symptoms persist, seek medical attention.

## 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-%
Zinc Oxide	1314-13-2	Y	Acute Aquatic Toxicity Category 1 Chronic Aquatic Toxicity Category 1	A	01-2119463881-32	>25
Zinc Phosphate	7779-90-0	Y		A	01-2119485044-40	>25

## Section 4: FIRST AID MEASURES

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<b>General Advice</b>	In case of doubt or when symptoms persist, seek medical attention.
<b>Eye Contact</b>	Hold eyelids apart and flush eyes with a steady, gentle stream of water for several minutes.
<b>Skin Contact</b>	IF ON SKIN: Wash with plenty of soap and water
<b>Inhalation</b>	Move to fresh air. If symptoms persist, call a physician.
<b>Ingestion</b>	If swallowed, rinse mouth with water (only if the person is conscious)
<b>Notes to Physician</b>	Treat symptomatically
<b>Personal Protective Equipment For First Aid Responders</b>	Wear suitable protective clothing
<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>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<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>	Avoid dust formation In case of exposure to high levels of airborne dust, wear a personal respirator in compliance with national legislation.
<b>Environmental Precautions</b>	Very toxic to aquatic life Toxic to aquatic life with long lasting effects Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system.

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**Methods for cleaning up** Sweep or vacuum spilled material The use of water wash down is not recommended unless the spilled material is already wet.

**Other Information:** Personal protection equipment (PPE) Refer to Section 8

## Section 7: HANDLING AND STORAGE

**Handling** Handle in accordance with good industrial hygiene and safety practice.

**Storage** Store in a dry area. Keep containers closed and protect from physical damage.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Limits** Provide adequate ventilation as well as local exhaust at critical locations

### Zinc Oxide

China

STEL: 5 MG/M3

TWA: 3 mg/m<sup>3</sup>

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)

OSHA

PEL: 15 mg/m<sup>3</sup> (total dust)

5 mg/m<sup>3</sup> (respirable fraction)

### Zinc Phosphate

OSHA

15 mg/m<sup>3</sup> Total Dust

5 mg/m<sup>3</sup> Respirable Dust

**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  
Do not empty into drains or water courses

**Section 9: PHYSICAL AND CHEMICAL PROPERTIES****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
<b>Melting Point / Melting Range</b>	Not applicable
<b>Freezing Point</b>	Not applicable
<b>Boiling Point</b>	No information available
<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>Decomposition Temperature</b>	
<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>Stability</b>	Stable
<b>Conditions to avoid:</b>	None known
<b>Incompatible materials</b>	None known
<b>Hazardous decomposition products</b>	By Fire: Carbon dioxide Carbon monoxide Oxides of Metals in composition
<b>Hazardous Reactions</b>	None under normal processing
<b>Hazardous polymerization:</b>	None under normal processing

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## Section 11: TOXICOLOGICAL INFORMATION

**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>	No known hazard in contact with skin
<b>Inhalation</b>	May cause respiratory tract 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**

Oral LD50 7950 mg/kg Rat

**Zinc Phosphate**

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>Serious eye damage/eye irritation</b>	Dust may cause mechanical irritation to eyes
<b>Respiratory Sensitization</b>	Does not cause sensitization
<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.
<b>Germ cell mutagenicity</b>	No information available.
<b>Reproductive Effects</b>	This product does not contain any known or suspected reproductive hazards.

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<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

<b>Ecotoxicity</b>	Very toxic 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 available
<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>	Empty containers should be taken to an approved waste handling site for recycling or disposal.

## Section 14: TRANSPORT INFORMATION

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

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<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)**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****Marine Pollutant**



HUBER

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## 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
Zinc Oxide	1314-13-2	215-222-5	01-211946388 1-32	Y	Y	Y	ENCS: (1)-561 ISHL: (1)-561	KE-35565	Y	Y	Y	Y	A
Zinc Phosphate	7779-90-0	231-944-3 *	01-211948504 4-40	Y	Y	Y	(1)-526 (ENCS) (1)-1181 (ENCS)	KE-34945	Zinc salts	Y	Y	Y	A

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## Section 16: OTHER INFORMATION

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

**Reason for Revision** GB/T 16483-2008  
GB/T 24774-2009  
GB 13690 – 2009  
GB/T 17519–2013

### GHS Classification

**Physical Hazard** Not classified

**Health Hazard** Not classified

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

### Label Elements

#### Symbols/Pictograms



**Signal Word** Warning

**Hazard Statement** H400 - Very toxic to aquatic life  
H410 - Very toxic to aquatic life with long lasting effects

### Abbreviations and acronyms

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

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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  
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**