



## Kemgard® 981

GHS (Globally Harmonized System)

Measures on the Management of Toxic Chemical Substances Labelling and Safety Data Sheets. December 11, 2014.

Issue Date 01/Jan/2024

Print Date 14/Dec/2023

Revision Number 1.4.1

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### Section 1: Identification: Product identifier and chemical identity

#### 1.1. Product identifier

**Product Name:** Kemgard® 981

**Pure substance/mixture** Mixture

#### Zinc Oxide

**CAS Number** 1314-13-2

**Weight-%** >25

#### Zinc Phosphate

**CAS Number** 7779-90-0

**Weight-%** >25

#### 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)

**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

**Pure substance/mixture** Mixture

**GHS Classification**

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## Hazards identification

<b>Physical Hazard</b>	Not classified
<b>Health Hazards</b>	Not classified
<b>Environmental Hazard</b>	Acute Aquatic Toxicity: Category 1 Chronic Aquatic Toxicity: Category 1

## 2.2. Label elements

### Symbols/Pictograms



<b>Signal Word</b>	Warning
<b>Hazard Statements</b>	H400 - Very toxic to aquatic life H410 - Very toxic to aquatic life with long lasting effects

## Precautionary Statements

<b>Prevention</b>	P202 - Do not handle until all safety precautions have been read and understood P273 - Avoid release to the environment
<b>Response</b>	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
<b>Storage</b>	Store away from incompatible materials.
<b>Disposal</b>	P501 - Dispose of contents/containers in accordance with local regulations.

2.3. Other hazards No information available.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixture

Mixture

Chemical Name	CAS Number	Taiwan	Taiwan - GHS	EU REACH registration number	Weight-%
Zinc Oxide	1314-13-2	Y	Aquatic Acute 1 Aquatic Chronic 1	01-2119463881-32	>25
Zinc Phosphate	7779-90-0	Y	Aquatic Acute 1	01-2119485044-40	>25

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			Aquatic Chronic 1		
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Zinc Phosphate:

M=1

M(Chronic)=1

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

<b>General Advice</b>	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.
<b>Eye Contact</b>	In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
<b>Skin Contact</b>	Wash with plenty of soap and water.
<b>Inhalation</b>	Do not breathe dust. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
<b>Ingestion</b>	Rinse mouth thoroughly with water.
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met.
<b>Notes to Physician</b>	Treat symptomatically.
<b>4.2. Most important symptoms and effects, both acute and delayed</b>	Dust contact with the eyes can lead to mechanical irritation. Contact with dust can cause mechanical irritation or drying of the skin.
<b>4.3. Indication of any immediate medical attention and special treatment needed</b>	Treat symptomatically. 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

Use extinguishing agent suitable for type of surrounding fire. Water spray (fog). Dry chemical. Foam. Carbon dioxide (CO<sub>2</sub>).

#### Unsuitable Extinguishing Media

None known.

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**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.

## 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  
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

## SECTION 8: Exposure controls/personal protection

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## Engineering Controls:

### Exposure Limit Values

#### Zinc Oxide

Taiwan  
ACGIH

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

OSHA

#### 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 Protection

Avoid contact with eyes Wear safety glasses with side shields (or goggles)

### Skin and Body Protection

Use suitable protective clothing, gloves and footwear, selected with regard for use conditions and exposure.

### Hand Protection

Impervious gloves: chemical resistant EN 420

### Respiratory Protection:

Avoid breathing dust. Use NIOSH/MSHA approved respiratory protection equipment when airborne exposures exceeds established guidelines. In case of exposure to high levels of airborne mist, wear a respirator in compliance with national legislation. EN 149, P2 Half-mask In case of exposure to high levels of airborne mist, wear a respirator in compliance with national legislation. EN 149, P2 Half-mask

## Hygiene Measures

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

## Environmental Exposure

Toxic to aquatic life with long lasting effects

## SECTION 9: Physical and chemical properties

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

#### Appearance:

Physical State	Solid Powder
Color	White
Odor	Odorless
Odor Threshold	No information available
pH:	6.5
Melting Point / Melting Range	Not applicable

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<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 hazard classes as defined in Regulation (EC) No 1272/2008

#### 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

**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.

#### Information on Likely Routes of Exposure

**Inhalation** May cause respiratory tract irritation

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<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

- 11.2.1. Endocrine disrupting properties** This product does not contain any known or suspected endocrine disruptors
- 11.2.2. Other information** Not applicable

## SECTION 12: Ecological information

**12.1. Toxicity** 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. Endocrine disrupting properties** 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)

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

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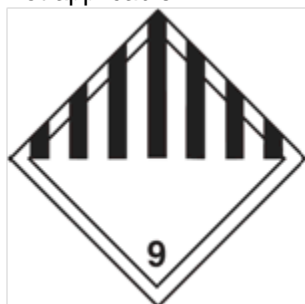
Subsidiary Risk -

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

Chemical Name	CAS Number	EC No	EU REACH registration number	Australia (AIIIC)	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

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## SECTION 16: Other information

**Prepared by** CP Kelco Global Regulatory Affairs  
Email: Regulatory.Affairs@cpkelco.com.

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

**Issue Date** 01/Jan/2024

### GHS Classification

#### Symbols/Pictograms



**Signal Word** Warning

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

### Hazards identification

**Physical Hazard** Not classified

**Health Hazards** Not classified

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

### 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)

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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**