



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
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Section 1: PRODUCT AND COMPANY IDENTIFICATION

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

Recommended Use Flame retardant Smoke suppressant

Uses advised against None known

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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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General Advice	In case of doubt or when symptoms persist, seek medical attention.
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
Inhalation	Move to fresh air. If symptoms persist, call a physician.
Ingestion	If swallowed, rinse mouth with water (only if the person is conscious)
Notes to Physician	Treat symptomatically
Personal Protective Equipment For First Aid Responders	Wear suitable protective clothing
Expected acute symptoms and delayed symptoms	None known

Section 5: FIRE FIGHTING MEASURES

Flammable Properties	None known
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media:	None known
Specific Hazards Arising from the Chemical	None known
Unusual fire & explosion hazards:	None
Protective measures:	Use protective equipment that is appropriate for surrounding materials.
Protective Equipment and Precautions for Firefighters	Wear self-contained breathing apparatus and protective suit

Section 6: SPILLAGE, ACCIDENTAL RELEASE MEASURES

Personal Precautions	Avoid dust formation In case of exposure to high levels of airborne dust, wear a personal respirator in compliance with national legislation.
Environmental Precautions	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/m³

ACGIH

STEL: 10 mg/m³ (respirable)

TWA: 2 mg/m³ (respirable)

NIOSH

Ceiling: 15 mg/m³ (total dust)

STEL: 10 mg/m³(fume)

TWA: 5 mg/m³ (total dust)

OSHA

PEL: 15 mg/m³ (total dust)

5 mg/m³ (respirable fraction)

Zinc Phosphate

OSHA

15 mg/m³ Total Dust

5 mg/m³ 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

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Section 9: PHYSICAL AND CHEMICAL PROPERTIES

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
Freezing Point	Not applicable
Boiling Point	No information available
Evaporation Rate	Not applicable
Flammability (solid, gas)	Not applicable
Upper flammability limit:	
Lower flammability limit:	
Vapor Density	Not applicable
Relative Density	
Water Solubility	Slightly soluble
Solubility in other solvents	
Partition coefficient	
Autoignition Temperature	Not applicable
Decomposition Temperature	
Specific Gravity	4.2 g/cm ³ , 20° C
VOC Content (%)	Not applicable

Section 10: STABILITY AND REACTIVITY

Stability	Stable
Conditions to avoid:	None known
Incompatible materials	None known
Hazardous decomposition products	By Fire: Carbon dioxide Carbon monoxide Oxides of Metals in composition
Hazardous Reactions	None under normal processing
Hazardous polymerization:	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

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

Acute Toxicity

Low hazard for usual industrial or commercial handling

Chronic Toxicity

No data available.

Chronic Effects

No data available.

Serious eye damage/eye irritation

Dust may cause mechanical irritation to eyes

Respiratory Sensitization

Does not cause sensitization

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.

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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.

Section 12: ECOLOGICAL INFORMATION

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

Section 13: DISPOSAL CONSIDERATIONS

Waste from Residues/Unused Products	Dispose of in accordance with local regulations
Contaminated Packaging:	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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DOT	Not regulated in non-bulk packages (<119 gal) UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Zinc oxide, Zinc phosphate)
ADR	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Zinc oxide, Zinc phosphate)
RID	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Zinc oxide, Zinc phosphate)
ADN	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Zinc oxide, Zinc phosphate)
IATA	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Zinc oxide, Zinc phosphate)
IMDG/IMO	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Zinc oxide, Zinc phosphate)
ICAO	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**

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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
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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)
IUCRID (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)

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