



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

E-mail 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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Physical Hazard	Not classified
Health Hazards	Not classified
Environmental Hazard	Acute Aquatic Toxicity: Category 1 Chronic Aquatic Toxicity: Category 1

2.2. Label elements**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.

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

General Advice 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.

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.

Inhalation Do not breathe dust. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

Ingestion Rinse mouth thoroughly with water.

Aspiration hazard Based on available data, the classification criteria are not met.

Notes to Physician Treat symptomatically.

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 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 (CO₂).

Unsuitable Extinguishing Media

None known.

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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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Taiwan

ACGIH

OSHA

TWA: 5 mg/m³ (fume)STEL: 10 mg/m³ (respirable)TWA: 2 mg/m³ (respirable)PEL: 15 mg/m³ (total dust)5 mg/m³ (respirable fraction)**Zinc Phosphate**

OSHA

15 mg/m³ Total Dust5 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 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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Melting point / Freezing point	Not applicable
Boiling Point	No information available
Freezing Point	Not applicable
Flash Point	Not determined
Evaporation Rate	Not applicable.
Flammability (solid, gas)	Not applicable
Upper flammability limit:	--
Lower flammability limit:	--
Vapor Pressure	Not applicable
Vapor Density	Not applicable
Vapor Density	Not applicable
Density	No data available
Relative Density	
Water Solubility	Slightly soluble
Partition coefficient	No information available
Autoignition Temperature	Not applicable
Decomposition Temperature	No data available
Viscosity	No information available.
Kinematic viscosity	Not applicable
Oxidizing Properties	Not applicable
Particle Size	No information available
Specific Gravity	4.2 g/cm ³ , 20° C
VOC Content (%)	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

10.1. Reactivity	Stable under normal conditions
10.2. Chemical stability	Stable under normal conditions
10.3. Possibility of hazardous reactions	None under normal processing
10.4. Conditions to avoid	Dust formation Incompatible materials
10.5. Incompatible materials	Strong oxidizing agents
10.6. Hazardous decomposition products	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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Ingestion	Ingestion is not a likely route of exposure
Skin	No known hazard in contact with skin
Eyes	Dust contact with the eyes can lead to mechanical irritation
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.

11.2. 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

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

TDG -Canada	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Zinc oxide, Zinc phosphate)
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

HUBER

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Subsidiary Risk

-

14.4. Packing group

III

14.5. Environmental hazards

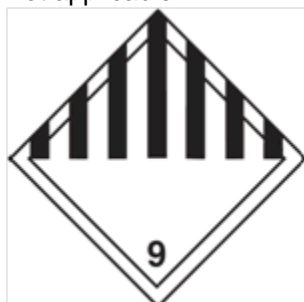
Yes : Marine Pollutant

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

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Tel: +1 678 247-7300.**Issue Date**

01/Jan/2024

GHS Classification**Symbols/Pictograms****Signal Word**

Warning

Hazard StatementsH400 - 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 HazardAcute 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