



Kemgard® 981

MoEL's Public Notice No. 2016-19 Standards for Classification and Labeling of Chemical Substances and Safety Data Sheet (SDS)

Issue Date 01/Jan/2024

Print Date 14/Dec/2023

Revision Number 1.4.1

Page 1 of 10

Section 1: PRODUCT AND COMPANY IDENTIFICATION

A. 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

B. Recommended use and Limitations on use

Recommended Use Flame retardant Smoke suppressant

Uses advised against None known

C. Supplier information

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

E-mail hubermaterials@huber.com

Internet www.huberadvancedmaterials.com

Contact person CHEMTREC
Emergency phone number +1 800 424 9300 International +1 703 527 3887

Section 2: HAZARDS IDENTIFICATION

A. Hazard category/Classification

Physical Hazards Not classified

Health Hazards Not classified

Environmental Hazards Acute Aquatic Toxicity: Category 1
Chronic Aquatic Toxicity: Category 1

B. Warning label items including precautionary statement

Issue Date 01/Jan/2024

Print Date 14/Dec/2023

Revision Number 1.4.1

Page 2 of 10

Label Elements

Symbols/Pictograms



Signal Words

Warning

Hazard Statements

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

Precautionary statement

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

C. Other hazards not included in the hazard category criteria (e.g. dust explosion hazard)

None known

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture

Mixture

Chemical Name	CAS Number	S. Korea (KECL)	Korean GHS Classification	Weight-%
Zinc Oxide	1314-13-2	KE-35565	Aquatic Acute 1 Aquatic Chronic 1	>25
Zinc Phosphate	7779-90-0	KE-34945	Aquatic Acute 1 Aquatic Chronic 1	>25

Section 4: FIRST AID MEASURES

Issue Date 01/Jan/2024

Print Date 14/Dec/2023

Revision Number 1.4.1

Page 3 of 10

- A. In case of eye contact** Rinse with water. Get medical attention if irritation develops and persists.
- B. In case of skin contact** Wash off with soap and water. Get medical attention if irritation develops and persists.
- C. In case of inhalation** Move to fresh air. Call a physician if symptoms develop or persist.
- D. In case of swallowing** Rinse mouth. Get medical attention if symptoms occur.
- E. Note to physician** Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

A. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media** Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).
- Unsuitable extinguishing media** None known

B. Specific hazards arising from the chemical (example: hazardous combustion products)

- Explosion hazard:** None known

C. Specific methods of fire-fighting

Self-contained breathing apparatus and full protective clothing must be worn in case of fire. In the event of fire and/or explosion do not breathe fumes. Move container from fire area if it can be done without risk.

Section 6: SPILLAGE, ACCIDENTAL RELEASE MEASURES

A. Personal precautions, protective equipment and emergency measures Ensure adequate ventilation. Avoid dust formation. See section 8 for more information.

B. Environmental precautions Very toxic to aquatic life with long lasting effects. Avoid discharge into drains, water courses or onto the ground.

C. Methods and materials for containment and cleaning up Vacuum or sweep material and place in a disposal container.

Section 7: HANDLING AND STORAGE

A. Precautions for safe handling

In case of exposure to environments exceeding the occupational exposure limit, wear a respirator in compliance with national legislation. Very toxic to aquatic life with long lasting effects

B. Conditions for safe storage (including any incompatibilities)

Issue Date 01/Jan/2024

Print Date 14/Dec/2023

Revision Number 1.4.1

Page 4 of 10

Keep container tightly closed in a dry and well-ventilated place

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

A. Exposure limit values, biological limit values, etc

Zinc Oxide

Korea

TWA: 5 mg/m³ (fume);
2 mg/m³ (respirable fraction)
STEL 10 mg/m³ (fume)

Korea

ACGIH

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

OSHA

Zinc Phosphate

OSHA

15 mg/m³ Total Dust
5 mg/m³ Respirable Dust

B. Engineering 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

C. Personal protective equipment

- **Eye protection**
- **Hand protection**
- **Body protection**

If contact is likely, safety glasses with side shields are recommended.
For prolonged or repeated skin contact use suitable protective gloves.
Wear suitable protective clothing.

Hygiene Measures

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

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

Issue Date 01/Jan/2024

Print Date 14/Dec/2023

Revision Number 1.4.1

Page 5 of 10

Flammability (solid, gas)	Not applicable
Upper flammability limit:	No data available
Lower flammability limit:	No data available
Vapor Density	Not applicable
Water Solubility	Slightly soluble
Solubility in other solvents	
Autoignition Temperature	Not applicable
Kinematic viscosity	No data available.
Specific Gravity	4.2 g/cm ³ , 20° C
VOC Content (%)	Not applicable

Section 10: STABILITY AND REACTIVITY

A. Stability and hazardous reaction potential

Stability Stable under normal conditions

Hazardous reaction potential None known

B. Conditions to avoid (e.g. static discharge, shock or Vibration, etc) Avoid creating dust. Incompatible materials.

C. Incompatible materials Strong oxidizing agents

D. Hazardous decomposition products No hazardous decomposition products are known.

Section 11: TOXICOLOGICAL INFORMATION

A. Information on likely routes of exposure

- **Respiratory organs** Inhalation of dust may cause irritation of the respiratory system.
- **Mouth** Not an expected route of exposure
- **Eyes** Dust contact with the eyes can lead to mechanical irritation
- **Skin** Contact with dust can cause mechanical irritation or drying of the skin

B. Information on health hazards

Zinc Oxide

Oral LD50 7950 mg/kg Rat

Zinc Phosphate

Oral LD50 > 5000 mg/kg Rat

Issue Date 01/Jan/2024

Print Date 14/Dec/2023

Revision Number 1.4.1

Page 6 of 10

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.

Section 12: ECOLOGICAL INFORMATION

- A. Ecotoxicity**
- | | |
|---|--|
| Hazardous to the aquatic environment, acute hazard | Very toxic to aquatic life |
| Hazardous to the aquatic environment, long-term hazard | Very toxic to aquatic life with long lasting effects |
- B. Persistence/degradability** No data available
- C. Bioaccumulative potential** No data available
- D. Mobility in soil** No data available

Issue Date 01/Jan/2024

Print Date 14/Dec/2023

Revision Number 1.4.1

Page 7 of 10

E. Other adverse effects None known

Section 13: DISPOSAL CONSIDERATIONS**A. Method of disposal**

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose in accordance with all applicable regulations.

B. Disposal considerations (including disposal of contaminated containers or packaging) Disposal should be in accordance with applicable regional, national and local laws and regulations

Section 14: TRANSPORT INFORMATION**Mode of Transportation (Road, Water, Air, Rail)**

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)

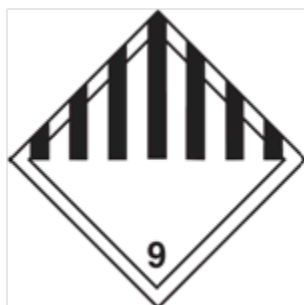
14.1. UN number UN3077**14.2. UN proper shipping name** UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Zinc oxide, Zinc phosphate)**14.3. Transport hazard class(es)** 9**Subsidiary Risk** -**14.4. Packing group** III**14.5. Environmental hazards** Yes : Marine Pollutant**14.6. Special precautions 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**

Issue Date 01/Jan/2024

Print Date 14/Dec/2023

Revision Number 1.4.1

Page 8 of 10



Marine Pollutant

**A. Method of disposal**

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose in accordance with all applicable regulations.

B. Disposal considerations (including disposal of contaminated containers or packaging) Disposal should be in accordance with applicable regional, national and local laws and regulations

Section 15: REGULATORY INFORMATION**National Regulations****Zinc Oxide**

CAS Number	1314-13-2
Weight-%	>25
Korean GHS Classification	Aquatic Acute 1 Aquatic Chronic 1

Zinc Phosphate

CAS Number	7779-90-0
Weight-%	>25
Korean GHS Classification	Aquatic Acute 1 Aquatic Chronic 1

Issue Date 01/Jan/2024

Print Date 14/Dec/2023

Revision Number 1.4.1

Page 9 of 10

Other domestic and foreign regulations

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	01-211946 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

Section 16: OTHER INFORMATION

A. Source of Information

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)
 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
 PNEC (Predicted No Effect Concentration)
 TSCA (Toxic Substances Control Act)
 GHS (Globally Harmonized System)

B. Issue Date

01/Jan/2024

Print Date

14/Dec/2023

C. Number of revisions and Date 1.4.1

Safety Data Sheet

Kemgard® 981

Issue Date 01/Jan/2024

Print Date 14/Dec/2023

Revision Number 1.4.1

Page 10 of 10

of most recent revision

D. Other

Prepared by

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

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