



Safety Data Sheet

FIRE RETARDANT ADDITIVES

Kemgard® 981-UF

Japan-JIS Z 7253:2012
Occupational Safety and Health Act
Globally Harmonized System (GHS)

Issue Date: 25/Sep/2020

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1. PRODUCT AND COMPANY IDENTIFICATION

| | |
|-----------------------------------|---|
| Product Name: | Kemgard® 981-UF |
| 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 |
| Company: | J.M. Huber Corporation 3100 Cumberland Boulevard, Suite 600 Atlanta, GA 30339 USA Tel: +1 678 247-7300 |
| Internet | www.hubermaterials.com |
| E-mail | hubermaterials@huber.com |
| Emergency Telephone Number | CHEMTREC: +1 800 424 9300 or International +1 703 527 3887 +81 03-3560-7316 |

2. HAZARD IDENTIFICATION

Japan GHS Classification

Hazard Category:

Hazardous to the aquatic environment - Acute, category 1

Hazardous to the aquatic environment - Chronic, category 1

H361 - Suspected of damaging fertility or the unborn child

H370 - Causes damage to the following organs:

Respiratory system

&

Systemic Toxicity

Physical Hazards

Not classified

Health Hazard

Causes damage to the following organs: Respiratory system , Systemic Toxicity
Suspected of damaging fertility or the unborn child

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Environmental Hazards Very toxic to aquatic life Very toxic to aquatic life with long lasting effects

GHS label elements
Symbols/Pictograms



Signal Word Danger

Hazard statements Causes damage to organs : Systemic Toxicity & Respiratory system Suspected of damaging fertility or the unborn child Very toxic to aquatic life Very toxic to aquatic life with long lasting effects

Precautionary Statements
Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection
Employ good industrial hygiene practice
Do not breathe dust
Wash hands thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid release to the environment

Response IF exposed or concerned: Call a POISON CENTER or doctor
IF ON SKIN: Wash with plenty of soap and water
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Collect spillage

Storage Store away from incompatible materials.
Store locked up

Disposal Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture Mixture

| Chemical Name | CAS Number | Japan | Japan GHS Classification | TSCA: United States | REACH registration number | Weight-% |
|---------------|------------|--------------------------------|---|---------------------|---------------------------|----------|
| Zinc Oxide | 1314-13-2 | ENCS: (1)-561 ISHL: (1)-561 | H400 - Very toxic to aquatic life H410 - Very toxic to aquatic life with long lasting effects H361 - Suspected of damaging fertility or the unborn child H370 - Causes damage to the | A | 01-2119463881-32 | >25 |

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|----------------|-----------|-----------------------------------|--|---|------------------|-----|
| | | | following organs: Respiratory system Systemic Toxicity | | | |
| Zinc Phosphate | 7779-90-0 | (1)-526 (ENCS) (1)-1181 (ENCS) | | A | 01-2119485044-40 | >25 |

4. FIRST AID MEASURES

| | |
|---|---|
| If inhaled: | Remove victim to fresh air and keep at rest in a position comfortable for breathing |
| IF ON SKIN: | Wash with plenty of soap and water Take off contaminated clothing and wash before reuse |
| IF IN EYES: | In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes Call a physician if irritation develops and persists |
| If swallowed: | Rinse mouth thoroughly with water |
| Self-Protection of the First Aider | Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves |
| Notes to Physician | Treat symptomatically. |

5. FIRE-FIGHTING MEASURES

| | |
|--|---|
| Suitable Extinguishing Media | Water spray (fog) Foam Dry chemical Carbon dioxide (CO ₂) |
| Unsuitable Extinguishing Media | Do not use water jetstream |
| Special hazards arising from the substance or mixture | Avoid dust formation |
| Fire-fighting measures | In case of fire and/or explosion do not breathe fumes Water mist may be used to cool closed containers Keep unauthorized personnel away |
| Special Protective Equipment for Firefighters | Wear self-contained breathing apparatus and protective suit |

6. ACCIDENTAL RELEASE MEASURES

| | |
|--|---|
| Protective Equipment and Precautions for Firefighters | Avoid dust formation Ensure adequate ventilation Use personal protection recommended in Section 8 Avoid contact with eyes and skin. Wear suitable personal protection equipment. |
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| | |
|---|---|
| | Keep unauthorized personnel away |
| Environmental Precautions | Keep out of drains, sewers, ditches and waterways Disposal considerations See section 13 for more information |
| 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 Minimize use of water during clean-up Recommended filter type: High efficiency particulate air filter (HEPA filter) |
| Other Information | Not applicable |

7. HANDLING AND STORAGE

Handling

Technical measures Provide adequate ventilation as well as local exhaust at critical locations
Ensure adequate ventilation
Use personal protection equipment
See section 8 for more information

Advice on safe handling Minimize dust generation and accumulation

Conditions for safe storage, including any incompatibilities Keep containers tightly closed in a cool, well-ventilated place

Hygiene Measures Wash hands thoroughly after handling

Storage

Packaging compatibilities Keep/store only in original container

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Zinc Oxide

Japan TWA: 4 mg/m³ (total dust)
1 mg/m³ (respirable dust)

Engineering Measures Ensure adequate ventilation, especially in confined areas

Personal Protective Equipment

Respiratory Protection In case of inadequate ventilation wear respiratory protection

Hand protection For operations where prolonged or repeated skin contact may occur, impervious gloves should be worn

Eye Protection Wear safety glasses with side shields (or goggles)

Skin and Body Protection Wear suitable protective clothing.
Chemical resistant apron.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice

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Wash thoroughly after handling
Avoid contact with eyes and skin
Do not breathe dust

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--------------------------------------|-------------------------------|
| Appearance: | |
| Physical State | Solid Powder |
| Color | White |
| Odor | Odorless |
| Odor Threshold | No information available |
| pH: | 6.5 (5% water suspension) |
| 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 |
| Water Solubility | Slightly soluble |
| Solubility in other solvents | |
| Autoignition Temperature | Not applicable |
| VOC Content (%) | Not applicable |
| Specific Gravity | 4.2 g/cm ³ , 20° C |

10. STABILITY AND REACTIVITY

| | |
|---|--------------------------------|
| Reactivity | Stable under normal conditions |
| Chemical stability | Stable under normal conditions |
| Possibility of hazardous reactions | None known |
| Conditions to avoid | Strong oxidizing agents. |
| Incompatible materials | Strong oxidizing agents |
| Hazardous decomposition products | None known |

11. TOXICOLOGICAL INFORMATION

General Information Users are advised to consider national Occupational Exposure Limits or other equivalent values.

Information on Likely Routes of Exposure

| | |
|-------------------|--|
| Inhalation | May cause respiratory tract irritation |
| Skin | No known hazard in contact with skin |

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| | |
|---|---|
| Eyes | Dust contact with the eyes can lead to mechanical 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. |
| 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. |

12. ECOLOGICAL INFORMATION

| | |
|--------------------------------------|--|
| Ecotoxicity | Very toxic to aquatic life with long lasting effects |
| Persistence and degradability | No data available |

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Bioaccumulation No data available.

Mobility in soil No data available

Hazardous to the ozone layer No data available

13. DISPOSAL CONSIDERATIONS

Disposal Dispose of in accordance with federal, state and local regulations

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal

14. TRANSPORT INFORMATION

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

| | |
|-----------------|--|
| ADR | UN3077, Environmentally hazardous substances, n.o.s. (Zinc oxide), 9, PG III, Marine Pollutant |
| ADN | UN3077, Environmentally hazardous substances, n.o.s. (Zinc oxide), 9, PG III, Marine Pollutant |
| IATA | UN3077, Environmentally hazardous substances, n.o.s. (Zinc oxide), 9, PG III, Marine Pollutant |
| IMDG/IMO | UN3077, Environmentally hazardous substances, n.o.s. (Zinc oxide), 9, PG III, Marine Pollutant |
| ICAO | UN3077, Environmentally hazardous substances, n.o.s. (Zinc oxide), 9, PG III, Marine Pollutant |

14.1. UN number UN3077

14.2. UN proper shipping name UN3077, Environmentally hazardous substances, n.o.s. (Zinc oxide), 9, PG III, Marine Pollutant

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

HUBER

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Marine Pollutant



15. REGULATORY INFORMATION

Global Inventories

Pure substance/mixture

Mixture

| Chemical Name | CAS Number | EC No | REACH registration number | Australia (AICS) | 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 |

Legend

X / Y: Complies ; A: Active ; - / N: Exempt / Not Listed

- KECL - Korean Existing and Evaluated Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- AICS - Australian Inventory of Chemical Substances
- TSCA (Toxic Substances Control Act)
- DSL (Domestic Substance List)
- NDSL (Non-Domestic Substances List)
- Japan - ISHL Notifiable Substances
- ENCS - Japan Existing and New Chemical Substances

16. OTHER INFORMATION

| | |
|-----------------------------------|--|
| Prepared by | Huber Engineered Materials Global Regulatory Affairs email: regulatory.affairs@huber.com |
| Reason for Revision | This SDS complies with the requirements of JIS Z 7250:2010 and JIS Z 7252:2009 (Japan) |
| Bibliography | NITE GHS Classified list Japan Society for occupational health (2015) recommendation of allowable concentrations, etc. ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value |
| Abbreviations and acronyms | International Agency for Research on Cancer (IARC) International Air Transport Association (IATA) International Maritime Dangerous Goods (IMDG) International Uniform Chemical Information Database (IUCLID) Workplace Hazardous Materials Information System (WHMIS) status and classification EPA SARA Title III Section 312 (40 CFR 370) Hazard Classification DOT (Department of Transportation) OSHA (Occupational Safety and Health Administration of the US Department of Labor) TWA - Time-Weighted Average The Classification, Labeling and Packaging of Substances and Mixtures (CLP) 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) Reportable Quantity (RQ) (RQ/% in mixture) STEL - Short Term Exposure Limit TLV® - Threshold Limit Value Derived No Effect Level (DNEL) SVHC: Substances of Very High Concern for Authorization: Land transport (ADR/RID) Biochemical oxygen demand (BOD) Chemical oxygen demand (COD) ICAO (air) (IMDG) International Maritime Dangerous Goods Positive Pressure Self-Contained Breathing Apparatus (SCBA) Predicted No Effect Concentration (PNEC) Globally Harmonized System (GHS) |
| 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