



Kemgard® 911B

Prepared in accordance with GB/T 16483-2008, GB/T 24774-2009, GB 13690 – 2009, GB/T 17519–2013
GHS (Globally Harmonized System)

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Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Kemgard® 911B

Pure substance/mixture Mixture

Zinc Oxide

CAS Number 1314-13-2

Weight-% >25

Zinc Molybdenum Oxide

CAS Number 22914-58-5
61583-60-6

Weight-% >25

Recommended Use Flame retardant Smoke suppressant

Uses advised against None known

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Registration Number No information available

Section 2: HAZARDS IDENTIFICATION

GHS Classification

Physical Hazard None

Health Hazard Acute toxicity - Inhalation Category 4
Specific target organ toxicity (STOT) - repeated exposure, category 2

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

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Label Elements

Symbols/Pictograms



Signal Word

Warning

Hazard Statement

H332 - Harmful if inhaled

H373 - May cause damage to organs through prolonged or repeated exposure

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

P260 - Do not breathe dust

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P271 - Use only outdoors or in a well-ventilated area

P273 - Avoid release to the environment

Response

P317 - Get emergency medical help.

P319 - Get medical help if you feel unwell.

P391 - Collect spillage

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water [or shower]

P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

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

P402 - Store in a dry place

Storage

Store in a dry place

Store away from incompatible materials.

Disposal

P501 - Dispose of contents/containers in accordance with local regulations

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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 Molybdenum Oxide	22914-58-5 61583-60-6	Y	Acute Tox. 4, H332 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 2, H411	A	01-2120800481-68-0000	>25

Section 4: FIRST AID MEASURES

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	Wash off immediately with soap and plenty of water. If skin irritation persists, call a physician.
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 IF exposed or concerned: Get medical advice/attention
Expected acute symptoms and delayed symptoms	None known

Section 5: FIRE FIGHTING MEASURES

Flammable Properties	None known
Suitable Extinguishing Media	Carbon dioxide (CO2) Dry chemical Foam

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Unsuitable extinguishing media: Water spray may be ineffective.

Specific Hazards Arising from the Chemical Avoid dust formation. In the event of fire and/or explosion do not breathe fumes. The pressure in sealed containers can increase under the influence of heat. Use water spray to cool unopened containers.

Protective Equipment and Precautions for Firefighters Wear self-contained breathing apparatus and protective suit

Section 6: SPILLAGE, ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Avoid dust formation. Avoid contact with skin, eyes and clothing. Avoid inhalation of dust.

Environmental Precautions Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent product from entering drains. Should not be released into the environment. Local authorities should be advised if significant spillages cannot be contained.

Methods for cleaning up Use personal protective equipment. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically and collect in suitable container for disposal. Avoid dust formation. Clean contaminated surface thoroughly.

Other Information: Material can create slippery conditions.

Section 7: HANDLING AND STORAGE

Handling Wear personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Do not breathe vapors/dust. Avoid contact with skin, eyes and clothing.

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

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

ACGIH

TWA: 3 mg/m³

STEL: 10 mg/m³ (respirable)

NIOSH

TWA: 2 mg/m³ (respirable)

Ceiling: 15 mg/m³ (total dust)

STEL: 10 mg/m³(fume)

OSHA

TWA: 5 mg/m³ (total dust)

PEL: 15 mg/m³ (total dust)

5 mg/m³ (respirable fraction)

Zinc Molybdenum Oxide

China

TWA: 8-hour: 4 mg/m³

China

STEL: Not established

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ACGIH

TWA: 10 mg/m³ dust

NIOSH

0.5 mg/m³ Respirable fraction

OSHA

8-hr TWA: 10 mg/m³

TWA: 5 mg/m³ (respirable); 10 mg/m³ (dust)

PEL: 5 mg/m³ (respirable)

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 goggles with side protection

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

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

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 5% Water suspension

Melting Point / Melting Range

No information available

Initial boiling point

No information available

Freezing Point

No information available

Boiling Point

No information available

Flash Point

Not applicable. Product/Substance is inorganic.

Evaporation Rate

Not applicable

Flammability (solid, gas)

Non-combustible

Upper flammability limit:

Not applicable

Lower flammability limit:

Not applicable

Vapor Pressure

No data available

Vapor Density

No data available

Relative Density

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Water Solubility	Slightly soluble
Solubility in other solvents	No information available
Partition coefficient	No data available
Autoignition Temperature	No data available
Decomposition Temperature	No information available
Viscosity	No information available.
VOC Content (%)	Not applicable

Section 10: STABILITY AND REACTIVITY

Stability	Stable under normal conditions
Conditions to avoid:	Heat, flames and sparks. Dust formation.
Incompatible materials	None known
Hazardous decomposition products	Metal oxides. Carbon oxides. May emit toxic fumes under fire conditions.
Hazardous Reactions	None under normal processing
Hazardous polymerization:	Hazardous polymerization does not occur

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
Symptoms related to the physical, chemical and toxicological characteristics	Dust may cause mechanical irritation to eyes.

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11.1. Information on toxicological effects

Zinc Oxide

Oral LD50 7950 mg/kg Rat

Zinc Molybdenum Oxide

Oral LD50 >10000 mg/kg Rat

IARC Not Listed

Specific target organ toxicity - Repeated exposure Kidney (based on tubular degeneration/regeneration of male Han Wistar rats at 125 mg/kg/day). NOAEL – 60 mg/kg Rat; Oral; 90-day.

Acute Toxicity	Low hazard for usual industrial or commercial handling
Serious eye damage/eye irritation	Dust may cause mechanical irritation to eyes
Respiratory Sensitization	Does not cause sensitization
Skin Corrosion/Irritation	Contact with dust can cause mechanical irritation or drying of the skin
Skin Sensitization	Not a skin sensitizer
Germ cell mutagenicity	No data 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	No data available.
Specific target organ toxicity - Repeated exposure	May cause damage to organs through prolonged or repeated exposure if inhaled. Kidney.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Persistence/Degradability: No data available.

Bioaccumulative Potential No data available.

Partition coefficient No data available

Bioconcentration factor (BCF) No data available.

Mobility in soil No data available.

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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)

DOT	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc Oxide, Zinc Molybdate) Not regulated in non-bulk packages (<119 gal)
ADR	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc Oxide, Zinc Molybdate)
ADN	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc Oxide, Zinc Molybdate)
IATA	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc Oxide, Zinc Molybdate)
IMDG/IMO	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc Oxide, Zinc Molybdate)
ICAO	UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc Oxide, Zinc Molybdate)

14.1. UN number UN3077

14.2. UN proper shipping name UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc Oxide, Zinc Molybdate)

14.3. Transport hazard class(es) 9

Subsidiary Risk -

14.4. Packing group III

14.5. Environmental hazards Marine Pollutant

14.6. Special precautions for Do not handle until all safety precautions have been read and understood.

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user

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable



Marine Pollutant



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 Molybdenum Oxide	22914-58-5 61583-60-6	245-322-4	01-212080048 1-68-0000	N	Y	Y	(1)-781 (ENCS)(ISHL)	KE-11910	N	N	N	Y	A

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

HUBER

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Section 16: OTHER INFORMATION

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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 None

Health Hazard Acute toxicity - Inhalation Category 4
Specific target organ toxicity (STOT) - repeated exposure, category 2

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

Label Elements

Symbols/Pictograms



Signal Word Warning

Hazard Statement H332 - Harmful if inhaled
H373 - May cause damage to organs through prolonged or repeated exposure
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)
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

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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)
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)

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End of Safety Data Sheet