

1. Product and Company Identification

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Product Name Zinc Powder
Part Number RXSOL-19-3793-025

Company Details:

RX MARINE INTERNATIONAL
105, A wing , BSEL , TECH PARK.
VASHI ,NEW BOMBAY 400703 INDIA

Branch : Kandla, Mumbai , Chennai, Vizag, Kolkata, UAE , OMAN , CANADA and KENYA

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2. Composition / Information on ingredients

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Product name	Cas No	EC No	Weight	Formula
Zinc powder for analysis	7440-66-6	231-175-3	65,39 g/mol	Zn

3. Hazards Identification

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Signal Word	Warning
Hazard Statements	H410 Very toxic to aquatic life with long lasting effects.
Precautionary statements	P273 Avoid release to the environment. P391 Collect spillage. P501 Dispose of contents/ container to an approved waste disposal plant.
Classification of the substance or mixture	No data available
Supplemental Hazard Statements	No data available
Other hazards	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

4. First Aid Measures

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General advice	Show this material safety data sheet to the doctor in attendance
If inhaled	fresh air.
Eye Contact	After eye contact: rinse out with plenty of water. Remove contact lenses.
Swallowed	After swallowing immediately make victim drink water (two glasses at most). Consult a physician.
Skin Contact	In case of skin contact Take off immediately all contaminated clothing. Rinse skin with water/ shower.
Inhalation	No data available
Ingestion	No data available
Most important symptoms and effects, both acute and delaye	The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
Indication of any immediate medical attention and special treatment needed	No data available

5. Fire-fighting Measures

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Flammability	No data available
Suitable extinguishing media	Sand Special powder against metal fire Cement
Unsuitable extinguishing media	Foam Water
Special hazards arising from the substance or mixture	Zinc/zinc oxides Combustible. Development of hazardous combustion gases or vapours possible in the event of fire.
Further information	Prevent fire extinguishing water from contaminating surface water or the ground water system.
Hazardous combustion products	No data available
Advice for firefighters	In the event of fire, wear self-contained breathing apparatus..
Protective Equipment	No data available
Specific Hazards Arising from the Chemical	No data available

6. Accidental Release Measures

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Personal precautions, protective equipment and emergency procedures	Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.
Spillage	No data available
Personal Protection	No data available
Environmental Precaution	Do not let product enter drains. Risk of explosion.
Methods and materials for containment and cleaning	Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.
Reference to other sections	For disposal see section 13.

7. Handling and Storage

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Advice on protection against fire and explosion	No data available
Incompatible materials	No data available
Hygiene measures	No data available
Advice on safe handling	For precautions see section 2.2.
Conditions for safe storage including any incompatibilities	No data available
Storage conditions	Tightly closed. Dry. Recommended storage temperature see product label.
Storage class	Storage class (TRGS 510) 11 Combustible Solids
Specific end use(s)	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated
Advice on general occupational hygiene	No data available

8. Exposure controls and personal protection

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Exposure controls	Personal protective equipment
Engineering Control	No data available
Eye/face protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses
Body Protection	Protective Clothing
Skin protection	This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those

stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Full contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Splash contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:KCL 741 Dermatril® L

Required when dusts are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system. Recommended Filter type: Filter type P2 The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented

No data available

Respiratory protection

Other Protection Measure

9. Physical and chemical properties

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Physical state	Powder
Colour	Metallic, gray
Odour	Odorless
Odor Threshold	No data available
pH	No data available
Melting Point	411 °C at ca.1.013,25 hPa
Boiling Point	908 °C at 1.013 hPa
Flash Point	No data available
Evaporation Rate	No data available
Flammability (solid, gas)	The product is not flammable.
Explosive limits	No data Available
Upper/lower flammability or explosive limits	No data available
Autoignition temperature	No data available
Decomposition temperature	No data available
Vapour pressure	1,33 hPa at 487 °C
Viscosity	Dynamic > 500 mPa.s at 417 °C
Density	7,140 g/cm ³ at 20 °C
Relative Density	6,9 at 22 °C
Specific Gravity	No data available
Partition coefficient	No data available
Explosive properties	No data available
Solubility	0,0001 g/l at 20 °C - OECD Test Guideline 105- slightly soluble
Ignition temperature	No data available
Particle characteristics	No data available

10. Stability and reactivity

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Reactivity	The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed
Chemical stability	The product is chemically stable under standard ambient conditions (room temperature)
Possibility of hazardous reactions	Exothermic reaction with: alkali hydroxides Fluorine carbon disulfide

halogen-halogen compounds acids alkalines Chlorine with Moisture. Risk of explosion with: ammonium compounds azides chlorates metal catalysts Nitric acid hydroxylamine hydrazine and derivatives Halogenated hydrocarbon Hydrogen nitrates Peroxides cadmium chromium(VI) oxide peroxi compounds Nitro compounds performic acid Oxidizing agents sulfur iodine with Water Risk of ignition or formation of inflammable gases or vapours with: Arsenic oxides Sodium hydroxide Tellurium selenium

Conditions to avoid

No data available

Incompatible materials

No data available

Hazardous decomposition products

In the event of fire: see section 5

11. Toxicological information

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Acute toxicity

LD50 Oral - Rat - male and female - > 2.000 mg/kg (OECD Test Guideline 401) LC50 Inhalation - Rat - male and female - 4 h - > 5,41 mg/l - dust/mist (OECD Test Guideline 403)

Skin corrosion/irritation

Skin - Rabbit No skin irritation - 5 d Remarks: (in analogy to similar products) (ECHA) The value is given in analogy to the following substances: Zinc oxide

Serious eye damage/irritation

Eyes - Rabbit No eye irritation - 24 h (OECD Test Guideline 405)

Respiratory or skin sensitization

Maximization Test - Guinea pig Result: negative (OECD Test Guideline 406) Remarks: (in analogy to similar products) The value is given in analogy to the following substances: Zinc oxide

Carcinogenicity

No data available

Germ cell mutagenicity

Test Type Ames test Test system: Escherichia coli/Salmonella typhimurium Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Remarks: (in analogy to similar products) The value is given in analogy to the following substances: Zinc sulphate Test Type: In vitro mammalian cell gene mutation test Test system: mouse lymphoma cells Metabolic activation: without metabolic activation Result: negative Remarks: (in analogy to similar products) (ECHA) The value is given in analogy to the following substances: zinc chloride Test Type: Chromosome aberration test in vitro Test system: Other cell types Metabolic activation: with and without metabolic activation Result: negative Remarks: (in analogy to similar products) (ECHA) The value is given in analogy to the following substances: zinc chloride Test Type: Micronucleus test Species: Mouse Cell type Red blood cells (erythrocytes) Application Route: Intraperitoneal Result: negative (in analogy to similar products) (ECHA) The value is given in analogy to the following substances: Zinc sulphate

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Additional Information

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. Repeated dose toxicity - Rat - male and female - Oral - 13 Weeks - NOAEL (No observed adverse effect level) - 31,52 mg/kg - LOAEL (Lowest observed adverse effect level) - 53,8 mg/kg Effects due to ingestion may include: chills, dry throat, sweet taste, Fever, Cough, Nausea, Vomiting, Weakness, Contact with eyes or skin may cause: Irritation To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. Ecological information

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Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances

Toxicity to fish	Flow-through test LC50 - other fish - 0,439 mg/l - 96 h Remarks: (ECHA)
Toxicity to daphnia and other aquatic invertebrates	Static test EC50 - Ceriodaphnia dubia (water flea) - 0,155 mg/l - 48 h (US-EPA)
Toxicity	No data available
Toxicity to bacteria	Static test NOEC - activated sludge - 0,1 mg/l - 4 h (ISO 9509) Remarks: (in analogy to similar products)
Toxicity to algae	Static test NOEC - Pseudokirchneriella subcapitata (green algae) - 0,05 mg/l - 3 d (OECD Test Guideline 201)
Bioaccumulation potential	This substance is not considered to be persistent, bioaccumulating and toxic (PBT).
Mobility in soil	No data available
Results of PBT and vPvB assessment	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Endocrine disrupting properties	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher
Other adverse effects	No data available

13. Disposal considerations

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Product	No data available
Contaminated packaging	No data available
Waste treatment Method	No data available

14. Transport information

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UN number	ADR/RID:3077	IMDG:3077	IATA:3077
UN proper shipping name	ADR/RID:ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc powder (pyrophoric))	IMDG:ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc powder (pyrophoric))	IATA:ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc powder (pyrophoric))
Transport hazard class(es)	ADR/RID:9	IMDG:9	IATA:9
Packaging group	ADR/RID:III	IMDG:III	IATA:III
Environmental hazards	ADR/RID:Yes	IMDG:Yes	IATA:Yes
Special precautions for user	Tunnel restriction code (-)		
Further information	EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.		

15. Regulatory information

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Safety, health and environmental regulations/legislation specific for the substance or mixture	This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.
Other regulations	Take note of Dir 94/33/EC on the protection of young people at work.
Chemical Safety Assessment	A Chemical Safety Assessment was not carried out for this substance.

16. Other information

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Other Information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall we be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Rx Marine International has been advised of the possibility of such damages.

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