

## 1. Product and Company Identification

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Product Name Zinc Dimethyl Dithiocarbamate  
Part Number RXSOL-19-3389-025

### Company Details:

RX MARINE INTERNATIONAL  
105, A wing , BSEL , TECH PARK.  
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## 2. Composition / Information on ingredients

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Chemical Name	Cas No	EC No	Whight	Formula
Zinc dimethyldithiocarbamate	137-30-4	205-288-3	100 %	C <sub>6</sub> H <sub>12</sub> N <sub>2</sub> S <sub>4</sub> Zn

## 3. Hazards Identification

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Signal Word	Danger
Hazard Statements	H302 Harmful if swallowed. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H330 Fatal if inhaled. H335 May cause respiratory irritation. H373 May cause damage to organs (Liver, Blood) through prolonged or repeated exposure if swallowed. H410 Very toxic to aquatic life with long lasting effects.
Precautionary statements	P273 Avoid release to the environment. P280 Wear protective gloves/ eye protection/ face protection. P301 + P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P314 Get medical advice/ attention if you feel unwell.
Classification of the substance or mixture	Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.
Supplemental Hazard Statements	None
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	Consult a physician. Show this material safety data sheet to the doctor in attendance.
If inhaled	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Swallowed	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Skin Contact	Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
Inhalation	Remove patient to fresh air, keep warm and at rest and get medical assistance in necessary.
Ingestion	Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.
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	May be combustible at high temperature.
Suitable extinguishing media	Carbon oxides Nitrogen oxides (NOx) Sulfur oxides Zinc/zinc oxides
Unsuitable extinguishing media	Foam Water
Special hazards arising from the substance or mixture	Hydrogen bromide gas Aluminum oxide Not combustible. Ambient fire may liberate hazardous vapours.
Further information	No data available
Hazardous combustion products	Fire may cause the evolution of Sulphur oxides, nitrogen oxides.
Advice for firefighters	Wear self-contained breathing apparatus for firefighting if necessary.
Protective Equipment	Use personal protective equipment.
Specific Hazards Arising from the Chemical	Has a fire-promoting effect due to the release of oxygen. Ambient fire may liberate hazardous vapours.

## 6. Accidental Release Measures

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Personal precautions, protective equipment and emergency procedures	Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.
Spillage	Oxidizing material. Stop leak if without risk. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Prevent entry into sewers, basements or confined areas dike if needed. Eliminate all ignition sources. Call for assistance on disposal.
Personal Protection	Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: Protective equipment see section 8.
Environmental Precaution	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
Methods and materials for containment and cleaning	Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.
Reference to other sections	For disposal see section 13.

## 7. Handling and Storage

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Advice on protection against fire and explosion	Provide appropriate exhaust ventilation at places where dust is formed.
Incompatible materials	Keep away from alkalis, strong oxidizing agents and metals. Provide containment walls of adequate capacity to hold any accidental spills.

Hygiene measures	Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. For precautions see section 2.2.
Precautions for safe handling	Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Conditions for safe storage, including any incompatibilities	Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.
Storage conditions	Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
Storage class	Storage class (TRGS 510): 6.1B: Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials
Specific end use(s)	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated
Advice on general occupational hygiene	Advice on safe handling Observe label precautions. Change contaminated clothing. Wash hands after working with substance.

## 8. Exposure controls and personal protection

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Exposure controls	No specific additional engineering controls are required. Provide good natural or artificial ventilation.
Engineering Control	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Eye/face protection	Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Body Protection	Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Skin protection	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. Full contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M) Splash contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
Respiratory protection	Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Other Protection Measure	Handle in accordance with good industrial hygiene and safety practice.
Control of environmental exposure	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.



Gloves Suit

## 9. Physical and chemical properties

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Physical state	Powder
Colour	White
Odour	No data available
Odor Threshold	Not Applicable
pH	No data available
Melting Point	248 - 257 °C
Boiling Point	No data available
Flash Point	No data available
Evaporation Rate	Not Applicable
Flammability (solid, gas)	No data available
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	No data available
Density	No data available
Relative Density	1,71 at 20 °C
Freezing point	No data available
Specific Gravity	No data available
Partition coefficient	log Pow: 1,65 at 20 °C
Explosive properties	No data available
Solubility	No data available
Ignition temperature	No information available.
Particle characteristics	No data available

## 10. Stability and reactivity

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Reactivity	No data available
Stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	No data available
Conditions to avoid	No data available
Incompatible materials	Strong acids
Hazardous Polymerization	In the event of fire: see section 5

## 11. Toxicological information

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Acute toxicity	LD50 Oral - Rat - male and female - 320 mg/kg LC50 Inhalation - Rat - 2 h - 26 mg/m <sup>3</sup> LD50 Dermal - Rabbit - male and female - > 2.000 mg/kg (OECD Test Guideline 402)
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Skin corrosion/irritation	Skin - Rabbit Result: No skin irritation - 4 h (OECD Test Guideline 404)
Serious eye damage/eye irritation	Eyes - Rabbit Result: Risk of serious damage to eyes. (OECD Test Guideline 405)
Respiratory or skin sensitization	In vivo assay - Guinea pig Result: May cause sensitization by skin contact. (OECD Test Guideline 406)
Carcinogenicity	No data available
Germ cell mutagenicity	Test Type: Mouse Test system: lymphocyte Remarks: Mutation in mammalian somatic cells. Test Type: Hamster Test system: ovary Metabolic activation: with and without metabolic activation Result: negative Test Type: In vivo micronucleus test Species: Mouse Application Route: Oral Method: Mutagenicity (micronucleus test) Result: negative
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	Inhalation - May cause respiratory irritation. - Respiratory Tract
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. Repeated dose toxicity - Rat - male and female - Oral - NOAEL (No observed adverse effect level) - < 7,4 mg/kg - LOAEL (Lowest observed adverse effect level) - 7,4 mg/kg RTECS: ZH0525000

## 12. Ecological information

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Persistence and degradability	Biodegradability aerobic - Exposure time 28 d Result: 7,7 % - Not readily biodegradable. (OECD Test Guideline 301B)
Bioaccumulative potential	Bioaccumulation Oncorhynchus mykiss (rainbow trout) - 96 h - 138 µg/l(Ziram) Bioconcentration factor (BCF): 470
Toxicity to fish	Flow-through test LC50 - Lepomis macrochirus (Bluegill) - 0,0097 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	Static test EC50 - Daphnia magna (Water flea) - 0,048 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to bacteria	Respiration inhibition EC50 - Sludge Treatment - 19,2 mg/l - 3 h (OECD Test Guideline 209)
Toxicity to algae	Static test EC50 - Pseudokirchneriella subcapitata (algae) - ca. 0,5 mg/l - 72 h (OECD Test Guideline 201)
Products Biodegradation	The methods for determining the biological degradability are not applicable to inorganic substances.
Mobility in soil	No Information 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	Very toxic to aquatic life with long lasting effects.

## 13. Disposal considerations

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Disposal methods	The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.
Contaminated packaging	Dispose of as unused product.
Waste treatment Method	Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

## 14. Transport information

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UN number	ADR/RID:2811 IMDG: 2811 IATA:2811
UN proper shipping name	ADR/RID:Toxic solid, organic, n.o.s. (Ziram) IMDG:Toxic solid, organic, n.o.s. (Ziram) IATA:Toxic solid, organic, n.o.s. (Ziram)
Transport hazard class(es)	ADR/RID:6.1 IMDG:6.1 IATA: 6.1
Packaging group	ADR/RID: II IMDG: II IATA: II
Environmental hazards	ADR/RID: yes IMDG: No IATA: No
Special precautions for user	Tunnel restriction code : (C/E)
Further information	Not classified as dangerous in the meaning of transport regulations.

## 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	Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable. Take note of Dir 94/33/EC on the protection of young people at work.
Authorisations and/or restrictions on use National legislation	Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. : ACUTE TOXIC : ENVIRONMENTAL HAZARDS
Chemical Safety Assessment	For this product a chemical safety assessment was not carried out

## 16. Other information

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Other Information	<p>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.</p> <p><b>DISCLAIMER OF LIABILITY</b> :The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.</p>
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