

1. Product and Company Identification

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Product Name Dibromo dimethyl hydantoin
Part Number RXSOL-69-5961-050

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	Weight	Formula
1,3-Dibromo-5,5-dimethylhydantoin for synthesis	77-48-5	201-030-9	285,92 g/mol	C ₅ H ₆ Br ₂ N ₂ O ₂

3. Hazards Identification

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Signal Word	Danger
Hazard Statements	H272 May intensify fire; oxidizer. H301 Toxic if swallowed. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H410 Very toxic to aquatic life with long lasting effects
Precautionary statements	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P260 Do not breathe dust. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. 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.
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. 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.

4. First Aid Measures

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General advice First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled	After inhalation fresh air.
Eye Contact	Rinse out with plenty of water. Remove contact lenses
Swallowed	If swallowed give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible. Do not attempt to neutralise.
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 delay	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	Water Foam Carbon dioxide (CO2) Dry powder
Unsuitable extinguishing media	For this substance/mixture no limitations of extinguishing agents are given
Special hazards arising from the substance or mixture	Carbon oxides Nitrogen oxides (NOx) Hydrogen bromide gas Combustible. Fire may cause evolution of: hydrogen bromide, nitrogen oxides, nitrous gases Development of hazardous combustion gases or vapours possible in the event of fire. Has a fire-promoting effect due to release of oxygen.
Further information	Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.
Hazardous combustion products	No data available
Advice for firefighters	Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
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: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. 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 with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area
Reference to other sections	For disposal see section 13

7. Handling and Storage

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Advice on protection against fire and explosion	Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.
Incompatible materials	No data available
Hygiene measures	Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.
Advice on safe handling	No data available
Conditions for safe storage, including any incompatibilities	No data available
Storage conditions	No metal or light-weight-metal containers. Protected from light. Tightly closed. Away from combustible materials and sources of ignition and heat. Keep locked up or in an area accessible only to qualified or authorized persons. Do not store near combustible materials. Recommended storage temperature see product label
Storage class	Storage class (TRGS 510) 5.1B Oxidizing 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	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 EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Full contact Material: Viton® Minimum layer thickness: 0,7 mm Break through time: 480 min Material tested: Vitoject® (KCL 890 / Aldrich Z677698, Size M) 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 EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de). Splash contact Material: butyl-rubber Minimum layer thickness: 0,7 mm Break through time: 30 min Material tested: Butoject® (KCL 898)
Respiratory protection	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 P3 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.
Other Protection Measure	No data available

9. Physical and chemical properties

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Physical state	Powder, Finecrystalline
Colour	Light yellow
Odour	Stinging
Odor Threshold	No data available
pH	No data available

Melting Point	177 - 179 °C at 1.013 hPa - OECD Test Guideline 102 - Decomposition
Boiling Point	No data available
Flash Point	No data available
Evaporation Rate	No data available
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
Viscosity	No data available
Density	1,00 g/cm ³ at 25 °C
Relative Density	No data available
Specific Gravity	No data available
Partition coefficient	Log Pow -0,94 - (Lit.), Bioaccumulation is not expected
Explosive properties	No data available
Solubility	1 g/l at 20 °C
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 Strong acids strong alkalis Strong oxidizing agents strong reducing agents Violent reactions possible with: Alcohols phosphorus Ketones Reducing agents Acids Ammonia ammonium compounds
Conditions to avoid	No data available
Incompatible materials	Iron, Aluminum, Copper
Hazardous product decomposition	No data available

11. Toxicological information

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Acute toxicity	LD50 Oral - Rat - 250 mg/kg Remarks: (RTECS) Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach. Acute toxicity estimate Oral - 250 mg/kg (ATE value derived from LD50/LC50 value)
Skin corrosion/irritation	Skin - Rabbit Result Causes burns. (External MSDS)
Serious eye damage/irritation	Eyes - Rabbit Result Causes burns. (External MSDS) Causes serious eye damage
Respiratory or skin sensitization	Sensitisation test - Guinea pig Result positive (External MSDS)
Carcinogenicity	No data available
Germ cell mutagenicity	No data available
Reproductive toxicity	No data available
Specific target organ toxicity-single exposure	No data available
Additional Information	Assessment 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. Material is extremely destructive to tissue of the mucous membranes and

upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice

12. Ecological information

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Persistence and degradability	Biodegradability aerobic - Exposure time 28 d Result: 0 % - Not readily biodegradable. Remarks: (HSDB)
Toxicity to fish	Static test LC50 - Oncorhynchus mykiss (rainbow trout) - 0,58 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 0,84 mg/l - 48 h (ECOTOX Database)
Toxicity	No data available
Toxicity to bacteria	No data available
Toxicity to algae	No data available
Products Biodegradation	No data available
Mobility in soil	No data available
Results of PBT av PvB 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	Discharge into the environment must be avoided

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:3084 IMDG:3084 IATA:3084
UN proper shipping name	ADR/RID:CORROSIVE SOLID, OXIDIZING, N.O.S. (1,3-dibromo-5,5-dimethylhydantoin) IMDG:CORROSIVE SOLID, OXIDIZING, N.O.S. (1,3-dibromo-5,5-dimethylhydantoin) IATA:CORROSIVE SOLID, OXIDIZING, N.O.S. (1,3-dibromo-5,5-dimethylhydantoin)
Transport hazard classess	ADR/RID: 8 (5.1) IMDG:8 (5.1) IATA:8 (5.1)
Packaging group	ADR/RID:II IMDG:II IATA:II
Environmental hazards	ADR/RID:No IMDG Marine pollutant:No IATA: No
Special precautions for user	Tunnel restriction code (E)
Further information	No data available

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

16. Other information

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Other Information

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No data available