

Material Safety Data Sheet

Boron Oxide (RXSOL-54-1529-026)



1. Product and Company Identification

Product Name Boron Oxide
Part Number RXSOL-94-1529-025

Company Details:

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

Chemical Name	Cas No	EC No	Whight	Formula
Boron	7440-42-8	231-151-2	= 100 %	B

3. Hazards Identification

Signal Word	Warning
Hazard Statements	H412 Harmful to aquatic life with long lasting effects.
Precautionary statements	None
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

General advice	Show this material safety data sheet to the doctor in attendance.
If inhaled	After inhalation: 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.
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

Suitable extinguishing media	Sand Special powder against metal fire Cement
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Unsuitable extinguishing media	Foam Water
Special hazards arising from the substance or mixture	Borane/boron oxides Not combustible. Ambient fire may liberate hazardous vapours.
Further information	None
Advice for firefighters	In the event of fire, wear self-contained breathing apparatus.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.
Environmental Precaution	No special precautionary measures necessary.
Methods and materials for containment and cleaning	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

Precautions for safe handling	For precautions see section 2.2.
Storage conditions	Tightly closed. Dry.
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

8. Exposure controls and personal protection

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
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 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.
Control of environmental exposure	No special precautionary measures necessary.

9. Physical and chemical properties

Physical state	Amorphous powder
Colour	No data available
Odour	No data available
pH	No data available
Melting Point	No data available
Boiling Point	ca.2.550 °C
Flash Point	Not applicable
Flammability (solid, gas)	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	0,772 g/mL at 25 °C - lit.
Relative Density	No data available
Partition coefficient	Not applicable for inorganic substances
Explosive properties	No data available
Solubility	0,00016 g/l at 20 °C - OECD Test Guideline 105
Particle characteristics	No data available

10. Stability and reactivity

Reactivity	No data available
Chemical stability	The product is chemically stable under standard ambient conditions (room temperature) .
Possibility of hazardous reactions	Exothermic reaction with: Risk of ignition or formation of inflammable gases or vapours with: Ammonia metallic oxides halogens halogen-halogen compounds halogen oxides nitrogen oxides nitrates nitrites nitrosyl compounds nitril compounds Oxidizing agents Nitric acid sulfur Water potassium dichromate Risk of explosion with: metallic oxides peroxi compounds silver compounds
Conditions to avoid	no information available
Incompatible materials	No data available
Hazardous decomposition products	In the event of fire: see section 5

11. Toxicological information

Acute toxicity	LD50 Oral - Rat - 650 mg/kg LC50 Inhalation - Rat - 4 h - > 5,08 mg/l - aerosol (OECD Test Guideline 403) Remarks: (ECHA) Dermal: No data available
Skin corrosion/irritation	Skin - Rabbit Result: No skin irritation (OECD Test Guideline 404) Remarks: (ECHA)
Serious eye damage/irritation	Eyes - Rabbit Result: No eye irritation (OECD Test Guideline 405) Remarks: (ECHA)
Respiratory or skin sensitization	Local lymph node assay (LLNA) - Mouse Result: Not a skin sensitizer. (OECD Test Guideline 429)
Carcinogenicity	No data available
Germ cell mutagenicity	Test Type: Ames test Test system: Salmonella typhimurium Method: OECD Test Guideline 471 Result: negative Remarks: (ECHA)
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. RTECS: ED7350000 To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Possible damages: After uptake: Chronic intoxication: lack of appetite change in weight Nausea Vomiting Diarrhea Convulsions Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

12. Ecological information

Persistence and degradability	The methods for determining biodegradability are not applicable to inorganic substances.
Toxicity to fish	static test LC50 - Pimephales promelas (fathead minnow) - 79,7 mg/l - 96 h (OPPTS 850.1075)
Toxicity to daphnia and other aquatic invertebrates	Static test EC50 - Daphnia magna (Water flea) - 42,81 mg/l - 48 h (OECD Test Guideline 202) Remarks: (in analogy to similar products) The value is given in analogy to the following substances: maleic acid
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 52,4 mg/l - 72 h (OECD Test Guideline 201)

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	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.
Other adverse effects	No ecological problems are to be expected when the product is handled and used with due care and attention.

13. Disposal considerations

Waste treatment Method	See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.
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14. Transport information

UN number	ADR/RID: -	IMDG: -	IATA: -
UN proper shipping name	ADR/RID:Not dangerous goods	IMDG:Not dangerous goods	IATA:Not dangerous goods
Transport hazard class(es)	ADR/RID: -	IMDG: -	IATA: -
Packaging group	ADR/RID: -	IMDG: -	IATA: -
Environmental hazards	ADR/RID: - no	IMDG: - no	IATA: - no
Special precautions for user	No data available		
Further information	Not classified as dangerous in the meaning of transport regulations.		

15. Regulatory information

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.
Chemical Safety Assessment	For this product a chemical safety assessment was not carried out

16. Other information

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. DISCLAIMER OF LIABILITY : 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.
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