

SAFETY DATA SHEET

SODIUM BOROXYDRIDE

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Compilation date: 26/03/2019

Revision No: 1

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: SODIUM BOROXYDRIDE

CAS number: 16940-66-2

EINECS number: 241-004-4

Product code: GPC9429

Synonyms: SODIUM TETRAHYDRIDOBORATE

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of substance / mixture: PC21: Laboratory chemicals.

1.3. Details of the supplier of the safety data sheet

Company name: Atom Scientific Ltd

2b East Tame Business Park

Hyde

Manchester

SK14 4GX

Tel: 0161 366 5123

Fax: 01704 337167

Email: technical@atomscientific.com

1.4. Emergency telephone number

Emergency tel: 07833453806

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: Water-react. 1: H260; Acute Tox. 3: H301; Skin Corr. 1B: H314; Repr. 1B: H360F; -: EUH014

Most important adverse effects: In contact with water releases flammable gases which may ignite spontaneously. Toxic if swallowed. Causes severe skin burns and eye damage. May damage fertility. Reacts violently with water.

2.2. Label elements

Label elements under CLP:

Hazard statements: H260: In contact with water releases flammable gases which may ignite spontaneously.

H301: Toxic if swallowed.

H314: Causes severe skin burns and eye damage.

H360F: May damage fertility.

EUH014: Reacts violently with water.

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Signal words: Danger

Hazard pictograms: GHS02: Flame

GHS06: Skull and crossbones

GHS08: Health hazard

GHS05: Corrosion



Precautionary statements: P201: Obtain special instructions before use.

P231: Handle under inert gas.

P232: Protect from moisture.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P308+313: IF exposed or concerned: Get medical advice/attention.

P370+378: In case of fire: Use dry powder or dry sand for extinction.

P402+404: Store in a dry place. Store in a closed container.

2.3. Other hazards

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.

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.1. Substances

Chemical identity: SODIUM BOROHYDRIDE

CAS number: 16940-66-2

EINECS number: 241-004-4

Contains: Formula : H4BNa

Molecular weight : 37.83 g/mol

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin. Wash immediately with plenty of soap and water. Take immediately to hospital. Consult a doctor.

Eye contact: Bathe the eye with running water for 15 minutes. Consult a doctor.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. Wash out mouth with water. Consult a doctor.

Inhalation: Move to fresh air in case of accidental inhalation of vapours. If unconscious, check for breathing and apply artificial respiration if necessary. Consult a doctor.

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4.2. Most important symptoms and effects, both acute and delayed

Skin contact: Corrosive.

Eye contact: Corrosive to eyes.

Ingestion: No data available.

Inhalation: No data available.

Delayed / immediate effects: No data available.

4.3. Indication of any immediate medical attention and special treatment needed

Immediate / special treatment: No data available.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Dry chemical powder.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: Not applicable.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Wear respiratory protection. Ensure adequate ventilation. Avoid dust formation. Avoid breathing vapours, mist or gas.

For personal protection see section 8.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Sweep up and shovel. Keep in suitable, closed containers for disposal. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

6.4. Reference to other sections

Reference to other sections: Refer to section 13 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

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7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in cool, well ventilated area. Keep container tightly closed. Never allow product to get in contact with water during storage. Reacts violently with water. Heat sensitive. Store under inert gas.

Suitable packaging: Not applicable.

7.3. Specific end use(s)

Specific end use(s): No special requirement.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits: No data available.

8.1. DNEL/PNEC Values

DNEL / PNEC No data available.

8.2. Exposure controls

Engineering measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product

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).

Hand protection: Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min 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.

Eye protection: Face-shield. Safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection: Complete suit protecting against chemicals. Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Environmental: Do not let product enter drains. Prevent from entering in public sewers or the immediate environment.

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Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Powder

Colour: White

Solubility in water: Soluble

Melting point/range°C: > 300 °C - dec

Flammability limits %: lower: 3.02

9.2. Other information

Other information: Not applicable.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: No data available.

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Reacts violently with water.

10.4. Conditions to avoid

Conditions to avoid: Exposure to moisture.

10.5. Incompatible materials

Materials to avoid: Water. Oxidising agents. Acids. Chemically active metals.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes of borane/ boron oxides. In combustion emits toxic fumes of sodium oxides.

Section 11: Toxicological information

11.1. Information on toxicological effects

Toxicity values:

Route	Species	Test	Value	Units
ORAL	RAT	LD50	162	mg/kg
DERMAL	RBT	LD50	4,000-8,000	mg/kg

Relevant hazards for substance:

Hazard	Route	Basis
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Acute toxicity (ac. tox. 3)	ING	Based on test data
Skin corrosion/irritation	DRM	Based on test data
Serious eye damage/irritation	OPT	Based on test data
Reproductive toxicity	--	Based on test data

Symptoms / routes of exposure

Skin contact: Corrosive.

Eye contact: Corrosive to eyes.

Ingestion: No data available.

Inhalation: No data available.

Delayed / immediate effects: No data available.

Other information: Not applicable.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values:

Species	Test	Value	Units
FISH	96H LC50	5,600	mg/l

12.2. Persistence and degradability

Persistence and degradability: No data available.

12.3. Bioaccumulative potential

Bioaccumulative potential: No data available.

12.4. Mobility in soil

Mobility: No data available.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: No data available.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Offer surplus and non-recyclable solutions to a licensed disposal company.

Recovery operations: Not applicable.

Disposal of packaging: Dispose of as unused product.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

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Section 14: Transport information

14.1. UN number

UN number: UN1426

14.2. UN proper shipping name

Shipping name: SODIUM BOROXYDRIDE

14.3. Transport hazard class(es)

Transport class: 4.3

14.4. Packing group

Packing group: I

14.5. Environmental hazards

Environmentally hazardous: No

Marine pollutant: No

14.6. Special precautions for user

Special precautions: No special precautions.

Tunnel code: E

Transport category: 1

Section 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Specific regulations: This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

* indicates text in the SDS which has changed since the last revision.

Phrases used in s.2 and 3: EUH014: Reacts violently with water.

H260: In contact with water releases flammable gases which may ignite spontaneously.

H301: Toxic if swallowed.

H314: Causes severe skin burns and eye damage.

H360F: May damage fertility.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.