



Safety Data Sheet

Date of Issue: 03.08.2020

Date of Expiry: 03.08.2025

1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Distributor Name : ECP Limited
Address : PO Box 34125, Birkenhead, Auckland 0746
Telephone : +64 9 480 4386
Facsimile : +64 9 480 4385
Emergency phone number : 0800 243 622 (24 hours)

Supplier Company : CHEM-SUPPLY PTY LTD
Address : 38 - 50 Bedford Street GILLMAN SA 5013 Australia
Telephone : (08) 8440-2000

Product	Boric acid AR Granular	Code	BA031
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Recommended use : Laboratory Investigations

2: Hazards identification

2.1 GHS classification of the substance/mixture

- Toxic to Reproduction: Category 1B

2.2 Hazard Statement

- H360 May damage fertility. May damage the unborn child.

Hazard Pictogram



Signal Word : DANGER

Precautionary Statement - prevention

P201 : Obtain special instructions before use.
P202 : Do not handle until all safety precautions have been read and understood.
P281 : Use personal protective equipment as required.

Precautionary statement – Response

P308+P313 : IF exposed or concerned: Get medical advice/attention.

Precautionary Statement – Disposal

P501 : Dispose of contents/container to an approved waste disposal plant.

3: Composition/information on ingredients

Substance / Mixture : Substance

3.1 Substances

Formula : H3BO3
Molecular weight : 61.83 g/mol

CAS-No. : 10043-35-3
EC-No. : 233-139-2
Index-No. : 005-007-00-2

4: First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this 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.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Borane/boron oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

7: Handling and storage

7.1 Precautions for safe handling

Avoid exposure - obtain special instructions before use. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Moisture sensitive.

8: Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.

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.

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.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type or 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.

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9: Physical and chemical properties

Form

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Solid

Appearance	:	White granules or powder.
Odour	:	Odourless.
Decomposition Temperature	:	185 °C (Melting point).
Boiling Point	:	300 °C
50 g/L (@ 21 °C)		
Solubility in water	:	50 g/L (@ 21 °C) Solubility in Water is increased by HCl, citric acid, tartaric acid and heat.
Solubility in Organic solvents	:	Soluble in alcohol, acetone and glycerol.
Specific Gravity	:	1.435 at 15 °C (water = 1)
pH	:	~ 5.1 (1.8g/l, 25 °C)
Vapour Pressure	:	2.7 hPa (20 °C)
Flammability	:	Non-combustible material.
Molecular Weight	:	61.83
Other Information Taste	:	Faintly bitter.

10: Stability and reactivity

Chemical Stability

Stable under normal use conditions.

Conditions to Avoid

Incompatible materials, excess heat, dust generation, high temperatures.

Incompatible Materials

Potassium, acetic anhydride, alkali metals, alkali carbonates and hydroxides.

Hazardous Decomposition Products

Boron compounds, boron oxides, borate fumes.

Possibility of Hazardous reactions

Contact with potassium or acetic anhydride may cause explosion.

Hazardous Polymerization

Will not occur

11: Toxicological information

Acute Toxicity - Oral - LD50 (rat): 2660 mg/kg.
Acute Toxicity – Dermal - LD50 (rat): >2000 mg/kg.

Ingestion

May be harmful if swallowed and absorbed. Swallowing can result in nausea, vomiting and diarrhoea followed by reddening, shedding and blistering of skin. Swallowing large quantities (> 0.3 g/kg or > 15 g / 50 kg person) may be fatal. Absorption of large quantities may cause agitation, spasms, tiredness, ataxia (lack of coordination) and drop in body temperature. Other symptoms include central nervous system depression, characterised by excitement, followed by headache, dizziness, fatigue and coma. May cause circulatory system failure. May cause disturbances to the digestive tract, peripheral nervous system, urinary and endocrine system.

Inhalation

May be harmful if inhaled. Dust causes irritation of the respiratory tract.

Skin

May be harmful if absorbed through the skin. Causes skin irritation. May be harmful by absorption through open wounds. May cause alteration in behaviour, sense organs, metabolism, the gastrointestinal tract, respiratory tract, depression of the circulation, persistent vomiting and diarrhoea, followed by profound shock and coma. The temperature becomes sub-normal and a scarletina-form rash may cover the entire body.

Eye

May be harmful if in contact with eyes. Dust causes irritating to eyes.

Carcinogenicity

No evidence of carcinogenic properties.

Reproductive Toxicity

H360 May damage fertility. May damage the unborn child.

Chronic Effects

Ingestion or absorption may cause nausea, diarrhoea, abdominal cramps, erythematous lesions on skin and mucous membranes, circulatory collapse, tachycardia, cyanosis, delirium, convulsions and coma.

Death has occurred from <5 g in infants and from 5 to 20 g in adults. Prolonged absorption can result in anorexia, weight loss, gastrointestinal irritation, vomiting, mild diarrhoea, skin rash, alopecia, convulsions and anaemia. May cause kidney damage.

Chronic use may cause borism - dry skin, eruptions and gastric disturbances.

Mutagenicity

No evidence of mutagenic effects.

Other Information

Substance should NOT be handled by pregnant staff.

12: Ecological information

Persistence and Degradability

Methods for the determination of biodegradability are not applicable to inorganic substances.

Bioaccumulative Potential

No bioaccumulation is to be expected (log P(o/w) <1.0).

Information on Ecological effects

No ecological problems are to be expected when the product is handled and used with due care and Attention.

Acute Toxicity - Daphnia

LC50 (Water flea): 53.2 mg/l/21d.

13: Disposal considerations

13.1 Waste treatment methods**Product**

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

14: Transport Information Table
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		ADR/RID – European packaging certification	IMDG International Maritime Dangerous Goods Code	IATA – DGR International Air Travel Association – Dangerous Goods Regulations
14.1	UN Number	-	-	-
14.2	UN Proper	Not dangerous	Not dangerous	Not dangerous goods

	Shipping name	goods	goods	
14.3	Transport Hazard Class	-	-	-
14.4	Packaging group	-	-	-
14.5	Environmental Hazards	No	No	No
14.6	Special precautions for user	none		
14.7	Incompatible materials	Potassium, Acid anhydrides, Strong oxidizing agents		

15: Regulatory information

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

National regulatory information

HSNO Approval Code: HSR002995

HSNO Group Standard Approval: HSR002596 - Laboratory Chemicals and Reagent Kits

Group Standard 2006HSR002596 - Laboratory Chemicals and Reagent Kits Group Standard 2006

Tracking Required: not required, not required

Approved Handler Cert.: not required

16: Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company 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 the company has been advised of the possibility of such damages.

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