

1. CHEMICAL IDENTIFICATION AND COMPANY INFORMATION

Product Identifiers

Product Name: Boric Acid, ACS Reagent
Product Number: B210

Other means of identification

Synonyms: None

Recommended Use: For Research Use Only

Restrictions on Use: Products manufactured by PhytoTechnology Laboratories and supplied by Austratec Pty Ltd are intended for research and laboratory use ONLY. Products are NOT to be used as human or animal therapeutics, cosmetics, agricultural or pesticidal products, food additives, or as household chemicals.

Details of Importer/Supplier

Company: Austratec Pty Ltd, Factory 12/49 Corporate Blvd, Bayswater VIC 3153, AUSTRALIA
Telephone: +61 3 9729 4528
Fax: +61 3 9729 4578
Website: www.austratec.com.au

Emergency phone number 13 11 26 (24 hour – Poisons Information Centre)

2. HAZARD(S) IDENTIFICATION

GHS Classification: Reproductive toxicity (Category 2)

GHS Label elements, including precautionary statements

Pictogram:  Signal Word: **Danger**

Hazard Statement(s): H361 – Suspected of damaging fertility or the unborn child.

Precautionary statement(s)

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.

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

Storage: P405 – Store locked up.

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

3. COMPOSITION AND INFORMATION ON INGREDIENTS

CAS Number: 69-57-8

EC Number: 233-139-2

Formula: H₃BO₃

Molecular Weight: 61.83 g/mol

INGREDIENT	CAS NUMBER	PERCENTAGE	HAZARDOUS
Boric Acid	10043-35-3	>99.5%	No exposure limits established by OSHA or ACGIH

4. FIRST AID MEASURES

Description of first aid measures

General advice: Consult a doctor/physician. Show this safety data sheet to the doctor in attendance.

Ingestion: MAY CAUSE IRRITATION IF SWALLOWED. If swallowed, wash mouth out with water. Never give anything by mouth to an unconscious person. Seek medical attention.

Inhalation: MAY CAUSE IRRITATION TO RESPIRATORY TRACT. Safely remove person to fresh air. If not breathing, begin cardiopulmonary resuscitation (CPR). If breathing is difficult, ensure clear airway and give oxygen. Seek medical attention.

Eye contact: DIRECT CONTACT MAY CAUSE IRRITATION, REDNESS, TEARING, OR BLURRED VISION. Flush eye out immediately with water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Seek medical attention if irritation persists.

Skin contact: MAY CAUSE IRRITATION, REDDENING, ITCHING OR INFLAMATION. Wash area thoroughly with soap and water. Remove and wash contaminated clothing. Seek medical attention.

Most important symptoms and effects, both acute and delayed

See section 2 and/or section 11

Recommendation for immediate medical attention and special treatment needed

No data available

5. FIRE FIGHTING MEASURES

Suitable extinguishing media Water spray, carbon dioxide, dry chemical powder, or appropriate foam. Use extinguishing media suitable for surrounding fire.

Specific hazards arising from the chemical

Hazardous combustion products: May emit toxic fumes under fire conditions.

Toxic gases produced: Borane/boride oxides.

Special protective equipment and precaution for firefighters In the event of fire, wear full protective clothing and NIOSH (US) or EN145 (EU) approved self contained breathing apparatus. Evacuate the area and fight fire from a safe distance.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Use personal protection equipment (PPE) recommended in Section 8. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation especially in confined areas. Evacuate personnel to safe areas. Avoid breathing dust.

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

Methods and materials for containment and cleanup Wear suitable protective clothing. Avoid dust formation. Carefully sweep up and remove. Place in a dry container and cover. Remove from area for safe disposal (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling	Avoid contact with skin and eyes. Avoid dust formation and aerosols. Avoid incompatible substances. Provide appropriate exhaust ventilation where dust is formed. Wash thoroughly after use.
Conditions for safe storage	Keep in a tightly closed container and store in a cool, dry and well ventilated area. Product is hygroscopic, protect from moisture.
Recommended Storage Temperature	Room Temperature.
Incompatibilities	Strong oxidizing agents acid, heavy metal salts

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure control measures

Australian Exposure Standards (TWA;STEL): No data available

OSHA's permissible exposure limits (PEL's): No data available

ACGIH threshold limit values (TLV's): No data available

Engineering controls Handle in accordance to general industrial hygiene and chemical safety practice.

Personal protective equipment (PPE)

Eye Face Protection: Chemical safety shield, glasses or goggles approved under NIOSH (US) or EN166 (EU). Have eye washing facilities readily available where eye contact can occur.

Skin Protection: Suitable protective gloves.

Body Protection: Lab coat or protective chemical suit. Protective equipment must be selected in accordance to the amount of dangerous substance within the specific workplace.

Respiratory Protection: Use an appropriate dust mask. Use N95 (US) or type P1 (EN143) dust mask where dust level is a nuisance. Appropriate respirator approved under NIOSH (US) or CEN (EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White powder
Odour	Odorless
Odour threshold	No data available
pH	No data available
Melting point	167 - 171°C
Initial boiling point/boiling range	No data available
Flash point (closed cup)	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Flammable limits (upper %)	No data available
Flammable limits (lower %)	No data available
Vapour pressure	3.5 hPa (2.6 mmHg) @ 20°C

Product No. B210

Vapour density	No data available
Relative density	No data available
Solubility	Soluble in water
Partition coefficient (n-octanol/water)	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available

10. STABILITY AND REACTIVITY

Reactivity	No data available.
Chemical stability	Stable under normal conditions of use and recommended storage conditions.
Possibility of hazardous reactions	No data available.
Conditions to avoid	Moist air.
Incompatible materials	Potassium, acid anhydrides.
Hazardous decomposition products	Borane/boride oxides.

11. TOXICOLOGICAL INFORMATION

Acute toxicity	LD ₅₀ (Oral, Rat)(mg/Kg):	2660
	LD ₅₀ (IV, Mouse)(mg/Kg):	1240
	LD ₅₀ (SCU, Mouse)(mg/Kg):	1740
Skin corrosion/irritation	No data available	
Serious eye damage/irritation	No data available	
Respiratory or skin sensitisation	No data available	
Germ cell mutagenicity	No data available	
Carcinogenicity	NTP:	No
	IARC:	No
	Z List:	No
	OSHA Reg:	No
Reproductive toxicity	No data available.	
Specific target organ toxicity (STOT)	Single Exposure:	No data available
	Repeated Exposure:	No data available
Aspiration hazard	No data available	
Target organs	Kidney, liver, reproductive system.	
Medical conditions aggravated by exposure	No data available	
Routes of entry	Inhalation, ingestion, skin and eye contact	
Symptoms associated with overexposure	Gastrointestinal upset, nausea, vomiting, diarrhea, abdominal cramps, and erythematous lesions on the skin and mucous membranes. Circulatory collapse, tachycardia, cyanosis, delirium, convulsions and coma. Death has been reported to occur in infants from less than 5 grams, and in adults 5 to 20 grams.	

The toxicological properties of this product have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Toxicity to fish LC50 – <i>Ptychocheilus lucius</i> – 279.0 mg/L – 96 hr Toxicity to daphnia. EC50 – <i>Daphnia magna</i> (water flea) – 53.2 mg/L – 21 days
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
Other adverse effects	No data available

13. DISPOSAL CONSIDERATIONS

Disposal procedure	Dispose in accordance with all applicable government, state, and environmental chemical safety practices.
EPA hazardous waste number	No data available

14. TRANSPORT INFORMATION

UN number	ADG: Non-Dangerous Goods IMDG: Non-Dangerous Goods IATA: Non-Dangerous Goods
Proper shipping/technical name	Non-Dangerous Goods.
Hazard Class	No data available
Packing group	No data available
Environmental hazards	No data available
Special precautions	No data available
Hazchem	Non-Dangerous Goods

15. REGULATORY INFORMATION

Notification Status

Australia (AICS):	Listed
New Zealand (NZIoC):	Not determined
USA (TSCA):	Listed
SARA TITLE III:	Section 302 (EHS) Ingredients: No
	Section 313 Ingredients: No

Section 304 (EHS/CERCLA) Ingredients:
Section 311/312 Hazard:

No
Chronic health hazard

16. OTHER INFORMATION

HMIS Rating:	Health Hazard	Chronic Health Hazard	Flammability	Physical Hazard
	1	*	0	0
NFPA Rating:	Health Hazard	Fire Hazard	Reactivity Hazard	Special Hazard
	0	0	0	

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