Infosafe No™	1CH1D	Issue Date :January 2019	RE-ISSUED by CHEMSUPP

Product Name : **BORIC ACID**

Classified as hazardous

1. Identification

GHS Product Identifier	BORIC ACID
Company Name	CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)
Address	38 - 50 Bedford Street GILLMAN SA 5013 Australia
Telephone/Fax Number	Tel: (08) 8440-2000 Fax: (08) 8440-2001
Emergency phone number	CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)
Recommended use of the chemical and restrictions on use	Analytical reagent, antibacterial agent, artificial gems, bactericide, borates, carpets, cosmetics, crockery, dyeing cotton and textiles, electric condensers, enamels, eyewash, fireproofing fabrics, fungus control on citrus fruits, glass fibres, hardening steel, hats, heat-resistant (borosilicate) glass, impregnating wicks, insecticide, insecticide, laboratory reagent, leather, manufacture of cements, metallurgy, nickel electroplating baths, ointment, painting, photography, porcelain, preservative, printing, soaps andweatherproofing wood.

Other Names

Name	Product Code
BORIC ACID Granular LR	BL031
BORIC ACID Powder LR	BL032
BORIC ACID Granular AR	BA031

Other Information

Chem-Supply Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Chem-Supply Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Chem-Supply Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

2. Hazard Identification

GHS classification of the substance/mixture	Toxic to Reproduction: Category 1B
Signal Word (s)	DANGER
Hazard Statement (s)	H360 May damage fertility. May damage the unborn child.
Pictogram (s)	Health hazard



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

Chemical Characterization	Solid

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	Boric acid	10043-35-3	100 %

4. First-aid measures

Inhalation	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Consult a physician.
Ingestion	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek immediate medical advice.
Skin	Immediately remove contaminated clothing and wash affected area with water for at least 15 minutes. Ensure contaminated clothing is washed before re-use. Seek medical advice /attention depending on the severity.
Eye contact	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open.In all cases of eye contamination it is a sensible precaution to seek medical advice.
First Aid Facilities	Maintain eyewash fountain and safety shower in work area.
Advice to Doctor	Treat symptomatically. Large intravenous doses of isotonic salt solution and plasma have been shown to act as an antidote. Care should be observed in applying ointments and dressings which contain boron over large areas of the body where the skin has been destroyed. It can be absorbed by the body in this way, affecting the central nervous system.
Other Information	For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

5. Fire-fighting measures

Specific Methods	Use measures suitable for extinguishing surrounding fire. Water mist, foam, carbon dioxide, dry powder.
Specific hazards arising from the chemical	Material does not burn. Fire or heat will produce irritating, poisonous and/or corrosive gases.
Decomposition Temp.	185 °C (Melting point).
Precautions in connection with Fire	Use suitable protective equipment for surrounding fire.

6. Accidental release measures

Personal Precautions	Avoid inhalation, contact with skin, eyes and clothing.
Personal Protection	Wear protective clothing specified for normal operations (see Section 8)
Clean-up Methods - Small Spillages	Sweep up (avoid generating dust) and remove to a suitable, clearly labelled container for disposal in accordance with local regulations.
Environmental Precautions	Prevent from entering into drains, ditches, rivers or the sea.

7. Handling and storage

Precautions for Safe Handling	Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure. Only use in well-ventilated areas.
Conditions for safe storage, including any incompatabilities	Store in a cool,dry place. Store in well ventilated area. Keep containers closed at all times.

8. Exposure controls/personal protection

Other Exposure Information	No exposure standards have been established for this product by Safe Work Australia, however, the TWA exposure standard for dusts/mists not otherwise specified is 10 mg/m3. All atmospheric contamination should be kept to as low a level as is workable.
Appropriate engineering controls	In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. These methods should be used in preference to personal protective equipment.
Respiratory Protection	Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or

	planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.
Eye Protection	The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.
Hand Protection	Wear gloves of impervious material conforming to AS/NZS 2161: Occupational protective gloves - Selection, use and maintenance. Final choice of appropriate glove type will vary according to individual circumstances. This can include methods of handling, and engineering controls as determined by appropriate risk assessments.
Personal Protective Equipment	Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.
Footwear	Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.
Body Protection	Wear suitable protective clothing to prevent skin contact. Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.
Hygiene Measures	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

9. Physical and chemical properties

Form	Solid
Appearance	White granules or powder.
Odour	Odourless.
Decomposition Temperature	185 °C (Melting point).
Boiling Point	300 °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 conditons.
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.

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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, diarrhea, abdominal cramps, erythematous lesions on skin and mucous membranes, circulatory collapse, tachycardia, cyanosis, delirium, convulsions and coma. Death has occured 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

Disposal Considerations	Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and disposed of according to relevant local, state and federal government regulations.

14. Transport information

Transport Information	Not classified as a Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

15. Regulatory information

Regulatory Information	Listed in the Australian Inventory of Chemical Substances (AICS).
Poisons Schedule	S5

16. Other Information

Literature References	'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia. Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997. National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007. Safe Work Australia, 'National Code of Practice fot the Preparation of Safety Data Sheets for Hazardous Chemicals', 2011. Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010.

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	Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'. Safe Work Australia, 'Hazardous Chemical Information System, 2005'. Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances (2011)'. Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995) 3rd Edition]'.
Contact Person/Point	Paul McCarthy Ph. (08) 8440 2000 DISCLAIMER STATEMENT: All information provided in this data sheet or by our technical representatives is compiled from the best knowledge available to us. However, since data, safety standards and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, we make no warranty either expressed or implied, with respect to the completeness or accuracy to the information contained herein. Chem-Supply accepts no responsibility whatsoever for its accuracy or for any results that may be obtained by customers from using the data and disclaims all liability for reliance on information provided in this data sheet or by our technical representatives.
Empirical Formula & Structural Formula	H3 BO3

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