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

1.1 Product identifier

Product name	BORIC ACID
CAS-No.	10043-35-3
Product code	AR1234, BP1234

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

Identified uses	Chemical for analysis and production.

1.3 Details of the manufacturer of the safety data sheet

Manufacturer	RCI LABSCAN LIMITED. 24 Rama 1 Road, Pathumwan, Bangkok 10330 Thailand
Telephone number	(662) 613-7911-4
Fax number	(662) 613-7915

1.4 Emergency Telephone Number

Emergency phone	(662) 613-7911-4

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Reproductive toxicity (Category 1B), H360D

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal word	Danger

Hazard statement(s)

H360D	May damage fertility or the unborn child.

Precautionary statement(s)

P203	Obtain, read and follow all safety instructions before use.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P318	IF exposed or concerned: Get medical advice.

2.3 Other hazards None

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms Orthoboric acid

CAS-No	EC-No	EC-Index-No	Formula	Molecular Weight	Weight %
10043-35-3	233-139-2	005-007-00-2	H_3BO_3	61.83 g/mol	<=100

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Concentration	Classification
Boric acid		
CAS-No 10043-35-3 EC-No 233-139-2 EC-Index-No 005-007-00-2	<=100%	Reproductive toxicity (Category 1B), H360D

For the full text of the H-Statements mentioned in this Section, see Section 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Move to fresh air in case of accidental inhalation of dust.
Skin contact	Remove contaminated clothing and wash affected skin with soap and water.
Eye contact	If the substance has got into the eyes, immediately wash out with plenty of water at least 15 minutes. Obtain medical attention.
Ingestion	Rinse mouth. After swallowing make victim drink water (two glasses at the most), call in physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in section 2.2 and section 11

4.3 Indication of any immediate medical attention and special treatment needed

Not Available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

In adaption to materials stored in the immediate neighborhood.

5.2 Special hazards arising from the substance or mixture

Non-combustible. Ambient fire may liberate hazardous vapors. The following may develop in event of fire: borane/boron oxides, sodium oxides.

5.3 Advice for firefighters

Do not stay in dangerous zone without self-contained breathing apparatus. Avoid contact with skin and wear suitable protective clothing.

5.4 Further information

Contain escaping vapors with water. Prevent fire-fighting water from entering surface water or ground water.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid generation of dusts; do not inhale dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protective equipment see **Section 8**.

6.2 Environmental precautions

Do not allow to enter drinking water and sewerage system.

6.3 Methods and materials for containment and cleaning up

Carefully sweep up, gather and remove. Avoid generation of dusts. Keep in suitable, closed containers for disposal. Clean up affected area.

6.4 Reference to other sections

For disposal see **Section 13**.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provision of good ventilation in the working area. Do not leave container open. Avoid spillage. Avoid rising dust.

7.2 Conditions for safe storage, including any incompatibilities

Keep tightly closed in a dry, cool and well-ventilated place. Keep out of direct sunlight and away from heat, water, moisture and incompatible materials.

Storage class 13 (TRGS 510); Non combustible solids.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Derived No Effect Level (DNEL)

Application Area	Health Effects	Exposure	Value
Worker	Long-term Systemic effects	Inhalation	8.3 mg/m³
Worker	Long-term Systemic effects	Skin contact	392 mg/kg Body weight
Consumer	Acute Systemic effects	Ingestion	0.98 mg/kg Body weight
Consumer	Long-term Systemic effects	Ingestion	0.98 mg/kg Body weight
Consumer	Long-term Systemic effects	Inhalation	4.15 mg/m³
Consumer	Long-term Systemic effects	Skin contact	196 mg/kg Body weight

Predicted No Effect Concentration (PNEC)

Compartment	Value
Aquatic intermittent release	13.7 mg/l
Fresh water	2.02 mg/l
Marine water	2.02 mg/l
Sewage treatment plant	10 mg/l
Soil	5.4 mg/kg

8.2 Exposure controls

Appropriate engineering controls

The product should only be used in ventilation hoods and fans.

Individual protection measures (Personal protective equipment, PPE)

Eye/face protection

Goggles giving complete protection to eyes.

Skin protection

Chemical resistant apron / corrosive protective clothing, heavy duty work shoes.

Handle with gloves

- Full contact wears gloves from nitrile rubber material.
- Splash contact wears gloves from nitrile rubber material.

The select protective gloves have to satisfy the specifications of EU Directive 89/686 EEC and standard EN 374 derived from it.

Respiratory protection
In case of insufficient ventilation, wear suitable respiratory equipment. Required when dusts are generated filter P3 (EN 143) or use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Environmental exposure controls
Prevent liquid entering sewers, basements and workpits.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Solid
Color	White
Odour	Odorless
Odour Threshold	Not Available
pH	3.8-4.8 at 33 g/l H_2O at 20ºC
Melting point/range	185 °C (decomposition)
Boiling point/range	Not Available
Flash point	Not Available
Evaporation rate	Not Available
Flammability (solid, gas)	Not Available
Explosion limits: lower	Not Available
upper	Not Available
Vapor Pressure	3.5 hPa at 20ºC
Relative Vapor Density	Not Available
Density	1.44 g/cm^3 at 20ºC
Bulk density:	~400-600 kg/m^3
Water solubility	50 g/l at 20ºC
Partition coefficient (n-octanol/water)	log Pow: 0.757
Auto-Ignition temperature	Not Available
Decomposition Temperature	Not Available
Viscosity	Not Available
Explosive properties	Not Explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.

SECTION 10: Stability and reactivity

10.1 Reactivity
Not Available

10.2 Chemical stability
Stable under recommended storage conditions. Chemically unstable at increased temperature.

10.3 Possibility of hazardous reactions
Risk of explosion in contact with acetic anhydride (heat).

10.4 Conditions to avoid
Heat.

10.5 Incompatible materials
Acetic anhydride (heat).

10.6 Hazardous decomposition products
Borane/boron oxides, sodium oxides (Hazardous decomposition products from under fire condition).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD_{50} (oral, rat): 2660 mg/kg.
LD_{50} (dermal, rabbit): >2000 mg/kg.

Skin corrosion/irritation

No skin irritation.

Serious eye damage/eye irritation

No eye irritation.

Respiratory or skin sensitization

Sensitization test (guinea pig): No skin-sensitizing effect.

Germ cell mutagenicity

Ames test is negative.
Mutagenicity (mammal cell test) is negative.

Carcinogenicity

Not Available

Reproductive toxicity

May damage fertility or the unborn child.

Specific target organ toxicity (STOT) - single exposure

Not Available

Specific target organ toxicity (STOT) - repeated exposure

Not Available

Aspiration hazard

Not Available

Further information

The product should be handled with the care usual when dealing with chemicals.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish	LC_{50} Oncorhynchus mykiss: 50 - 100 mg/l /96 h.
Toxicity to daphnia and other aquatic invertebrates	EC_{50} Daphnia magna: 133 mg/l/48 h.

12.2 Persistence and degradability

Biodegradability	Method for the determination of biodegradability is not applicable to inorganic substance.

12.3 Bioaccumulative potential

Partition coefficient (n-octanol/water)	log Pow: 0.757 No bioaccumulation is to be expected (log P o/w <1)

12.4 Mobility in soil

Not Available

12.5 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.

12.6 Other adverse effects

Do not allow to enter waters, waste water or soil.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

There are no uniform EC Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding law and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste or burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

Contaminated packaging

Disposal in compliance with official regulations. Handle contaminated packaging as hazardous waste in the same way of the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

SECTION 14: Transport information

Not subject to transport regulations.

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

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

Not Available

15.2 Chemical Safety Assessment

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

SECTION 16: Other information

Recommended restrictions

Take notice of labels and safety data sheets for the working.

Reference

Globally Harmonized System of Classification and Labelling of Chemicals (GHS).
Labelling according to EC Directives 67/548 EEC and Regulation (EC) No 1272/2008.
Transportation information according to Recommendations on the Transport of Dangerous Goods, Model Regulations. Twelfth revised edition. United Nations.
Institute for Occupational Safety and Health of the German Social Accident Insurance in Sankt Augustin/Germany, Source: IFA for Databases on hazardous substances (GESTIS).

Further information

Contact to RCI Labscan Limited.

Revision Date
14/11/2025

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in the text.