Safety data sheet

ChemiPURE Boric Acid, ≥99.9%

Product name ChemiPURE Boric Acid, ≥99.9%	Catalog no. BAC05, BAC10
Synonyms Orthoboric acid; boracic acid	SDS revision -
CAS no. 10043-35-3	Format version / date 3 / 25 October 2026

01 PRODUCT AND COMPANY IDENTIFICATION

Product identifier	ChemiPURE Boric Acid, ≥99.9%
Product code	BAC05, BAC10
CAS number	10043-35-3
EC number	233-139-2
Recommended use	For research use only. Laboratory reagent for preparation of buffers, including TBE electrophoresis buffer.
Supplier	EcoTech Biotechnology
Website	www.ecotechbiotech.com
Address	Universite Mah. İpekyolu Cad. Ata Teknokent Sitesi B Blok No: Z10, Yakutiye, Erzurum, Türkiye
Telephone	0090 544 327 34 97
SDS contact	info@ecotechbiotech.com
Emergency telephone	0090 544 327 34 97
Available	Monday-Saturday/08:00-20:00/GMT+3
Languages	Turkish/English
Outside these hours	Contact: info@ecotechbiotech.com

02 HAZARDS IDENTIFICATION

Classification	Reproductive toxicity, Category 1B (Repr. 1B; H360FD), Regulation (EC) No. 1272/2008 (CLP).
Label elements	GHS08 (Health hazard). Restricted to professional users.
Symbols / pictograms	
Signal word	Danger
Hazard statements	H360FD - May damage fertility. May damage the unborn child.
Precautionary statements - Prevention	P201 Obtain special instructions before use. P202 Do not handle until precautions have been read and understood. P280 Wear protective gloves, clothing and eye/face protection.
Precautionary statements - Response / storage / disposal	P308+P313 IF exposed or concerned: Get medical advice/attention. P405 Store locked up. P501 Dispose of contents/container at an approved waste facility.
Other hazards	Avoid generating or breathing dust. Dust may irritate eyes, skin and the respiratory tract.

Composition & response

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03 COMPOSITION / INFORMATION ON INGREDIENTS

Product name	ChemiPURE Boric Acid, ≥99.9%
Synonyms	Orthoboric acid; boracic acid; hydrogen borate
Concentration	≥99.9% (purity)
Formula	H3BO3
Molecular weight	61.83 g/mol
Substance statement	Substance: boric acid (CAS 10043-35-3; EC 233-139-2), purity ≥99.9%. The identity of trace impurities is not available.

04 FIRST AID MEASURES

4.1 Description of first aid measures

Eye contact	Rinse cautiously with water for at least 15 minutes, including under eyelids. Remove contact lenses if easy. Seek medical attention.
Skin contact	Remove contaminated clothing. Wash affected skin thoroughly with water for at least 15 minutes. Seek medical advice if symptoms occur.
Inhalation	Move the person to fresh air. Obtain medical assistance if breathing difficulty or other symptoms occur.
Ingestion	Rinse mouth. Do not induce vomiting. Contact a physician or poison centre promptly. Never give anything by mouth to an unconscious person.
Self-protection of first aider	Wear appropriate gloves, eye protection and protective clothing; avoid contact with dust.
Most important symptoms / effects	May damage fertility and the unborn child. Dust may irritate eyes and respiratory tract.
Notes to physicians	Treat symptomatically.

05 FIREFIGHTING MEASURES

Suitable extinguishing media	Not flammable. Use water spray, dry chemical, foam or carbon dioxide appropriate for the surrounding fire.
Unsuitable extinguishing media	No specific unsuitable extinguishing media identified.
Special hazards arising from the substance or mixture	Strong heating may produce boron oxides and irritating or toxic fumes.
Explosion data	Non-combustible solid; no specific explosion hazards identified under normal conditions.
Advice for firefighters	Wear protective clothing and a self-contained breathing apparatus when exposed to smoke or fumes.

Safe use & protection

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06 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Ensure ventilation. Avoid raising dust or inhaling it. Wear protective gloves, safety goggles and laboratory coat.
Environmental precautions	Prevent entry into drains and surface waters. Avoid uncontrolled environmental release.
Methods and materials for containment and cleaning up	Sweep or vacuum carefully without generating dust; place material in suitable closed containers for disposal.
Reference to other sections	See Sections 8 and 13.

07 HANDLING AND STORAGE

Precautions for safe handling	Obtain special instructions before use. Avoid dust, inhalation and skin/eye contact. Follow laboratory hygiene; do not eat, drink or smoke.
Conditions for safe storage	Keep tightly closed at 15–25 °C in a dry, ventilated area. Protect from moisture and incompatible materials. Store locked up.
Container labeling	Keep in a properly labelled original or compatible container.

08 EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

ACGIH inhalable particulate TLV: TWA 2 mg/m³; STEL 6 mg/m³. Check applicable national workplace limits.

8.2 Exposure controls

Engineering measures	Provide local dust extraction when needed and accessible eyewash/safety shower facilities.
Hygiene measures	Wash hands and exposed skin after work. Remove contaminated clothing. Do not eat, drink or smoke during handling.
Eye / face protection	Use protective goggles or safety glasses meeting EN 166.
Hand protection	Wear appropriately selected chemical-resistant protective gloves. Inspect gloves before use.
Skin and body protection	Wear a laboratory coat, long protective clothing and closed shoes.
Respiratory protection	Use suitable particulate respiratory protection if dust exposure cannot be controlled (e.g. EN 143 particulate filter).

Material properties

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09 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	White crystalline powder / solid
Odor	Odorless
Odor threshold	No data available
pH	3.8–4.8 (33 g/L aqueous solution)
Melting point / freezing point	Approx. 169 °C (decomposition upon heating)
Initial boiling point and boiling range	No data available
Flash point	Not applicable (non-combustible solid)
Evaporation rate	Not applicable (solid)
Flammability (solid, gas)	Non-combustible; not classified as flammable
Upper / lower flammability or explosive limits	Not applicable
Vapor pressure	No reliable product-specific data available
Vapor density	Not applicable (solid)
Relative density	No data available
Solubility(ies)	Soluble in water
Partition coefficient: n-octanol / water	log Pow: approximately −0.757
Auto-ignition temperature	Not applicable
Decomposition temperature	Decomposition may occur from approximately 100 °C
Viscosity	Not applicable (solid)
Explosive properties	Not classified as explosive
Oxidizing properties	Not classified as oxidizing

10 STABILITY AND REACTIVITY

Reactivity	No hazardous reaction expected under normal laboratory handling.
Chemical stability	Stable under recommended storage conditions; protect from moisture.
Possibility of hazardous reactions	No hazardous polymerization or reactions expected under normal processing.
Conditions to avoid	Excess heat, dust formation and moisture exposure.
Incompatible materials	Strong oxidizing agents and strong bases.
Hazardous decomposition products	Boron oxides may form during thermal decomposition.

Health & environment

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11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity	Oral LD50 (rat): approximately 2,660 mg/kg. Dermal LD50 (rabbit): >2,000 mg/kg.
Skin corrosion / irritation	Not classified based on available data; dust contact may cause irritation.
Serious eye damage / eye irritation	Not classified based on available data; dust can irritate eyes.
Carcinogenicity	Not classified as carcinogenic based on available data.
Reproductive toxicity	Repr. 1B; H360FD - May damage fertility. May damage the unborn child.
STOT - SE	Not classified based on available data.
STOT - RE	Not classified based on available data.
Aspiration hazard	Not applicable to a solid.

11.2 Potential health effects

Ingestion: May cause gastrointestinal discomfort, nausea or vomiting.
Inhalation: Dust may irritate airways.
Skin: Dust contact may cause irritation.
Eyes: Dust may cause discomfort or redness.

11.3 Additional information

Repeated exposure may pose reproductive or developmental health hazards. Avoid exposure when pregnant or planning pregnancy.

12 ECOLOGICAL INFORMATION

Ecotoxicity	Aquatic data: fish LC50 (Gambusia affinis, 96 h) approximately 5,600 mg/L; Daphnia magna EC50 (48 h) 115–153 mg/L. Avoid release to drains.
Persistence and degradability	Inorganic compound; conventional biodegradation data are not applicable.
Bioaccumulative potential	No reliable assessment available; log Pow approximately −0.757.
Mobility in soil	Water solubility suggests mobility in soil and water.
Results of PBT and vPvB assessment	No data available.

13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product	Collect as laboratory chemical waste. Dispose via an authorised waste service in accordance with applicable local regulations. Do not release to drains.
Contaminated packaging	Dispose of containers and contaminated packaging according to relevant chemical-waste regulations.

Transport & reference

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14 TRANSPORT INFORMATION

Mode	UN no.	UN proper shipping name	Hazard class	Packing group	Environmental hazards
ADR/RID	-	Not regulated	-	-	No
IMDG	-	Not regulated	-	-	No
IATA	-	Not regulated	-	-	No

15 REGULATORY INFORMATION

Safety, health and environmental regulations / legislation	Boric acid (CAS 10043-35-3; EC 233-139-2) is classified Repr. 1B (H360FD) under CLP and is included in the REACH Candidate List of Substances of Very High Concern (SVHC) for reproductive toxicity. Relevant REACH Annex XVII restrictions apply.
Environmental hazards	Not classified as hazardous for transport; avoid uncontrolled environmental release.
Chemical safety assessment	No product-specific chemical safety assessment available.

16 OTHER INFORMATION

Key to abbreviations and acronyms

STOT-SE	Specific Target Organ Toxicity - Single Exposure
STOT-RE	Specific Target Organ Toxicity - Repeated Exposure
PBT	Persistent Bioaccumulative and Toxic
vPvB	very Persistent very Bioaccumulative and toxic
ADR	European Agreement concerning the international carriage of Dangerous goods by Road
CAS	Chemical Abstracts Service
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime code for Dangerous Goods
REACH	Registration, Evaluation, Authorization and restriction of Chemicals
RID	Regulations concerning the International transport of Dangerous goods by rail