



BUCHI Certificate of Analysis (CoA)

Product Characteristics

Product:	Boric Acid 4% with Sher Indicator, pH 4.65 @ 20°C
Order code:	11064973
LOT no.:	BOAIS4524D1
Date of test:	10/04/2024
Production date:	10/04/2024
Expiration date:	28/10/2025

Testing Results

Description	Specification	Measured value
Boric acid content	3.92 – 4.08 %	4.06 %
pH value @20 °C	4.50 – 4.80	4.74
Sensitivity test	pH > 7.5: Green pH 7.4 – 4.8: Blue pH 4.65: Brown	pH > 7.5: Green pH 7.4 – 4.8: Blue pH 4.65: Brown

Test method: Tested by potentiometric titration, to in-house method.

Traceability: This solution was checked by means of Sodium Hydroxide Analytical Volumetric Standard. This volumetric standard is directly traceable to a Standard Reference Material of National Institute of Standards and Technology (USA), 84L Potassium Hydrogen Phthalate. All raw materials used to prepare this product are of high purity.

Certificate issue date: 11.04.2024

This certificate is electronically generated and does not require a signature.

This certificate must not be reproduced except in full.

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

***1.1 Product identifier**

***Trade name:** BORIC ACID 4% WITH SHER INDICATOR
pH 4.65 ± 0.15 @ 20°C

***Article number:** 11064973

***Registration number**

A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

***Product category** For experiments, research, or testing purposes only. Prohibited of use for other purposes.

***Application of the substance / the mixture** Laboratory Chemicals

***1.3 Details of the supplier of the safety data sheet**

***Manufacturer/Supplier:** See Below

***Manufacturer:**

Reagecon Diagnostics Ltd.
Shannon Free Zone,
Shannon,
Co. Clare,
Ireland.
Tel +353 61 472622
Fax +353 61 472642

***Supplier:**

BÜCHI Labortechnik AG
Meierseggrasse 40
CH - 9230 Flawil
Telephone: +41 71 394 63 63
FAX: +41 71 394 65 65
Email: schweiz@buchi.com
Internet: www.buchi.com

***Further information obtainable by contacting:** sds@reagecon.ie

***1.4 Emergency telephone number:**

National Poisons Information Centre: +353 (1) 809 2166 (8.00 a.m. to 10.00 p.m. 7 days a week)
Healthcare Professionals: +353 (1) 809 2566 (24 hour service)

For Hazardous Materials [or Dangerous Goods] Incident
Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC
For Ireland call +(353)-19014670
For Outside Ireland call +1 703-741-5970 / 1-800-424-9300 CCN849800

SECTION 2: Hazards identification

***2.1 Classification of the substance or mixture**

***Classification according to Regulation (EC) No 1272/2008**



health hazard

Repr. 1B H360FD May damage fertility. May damage the unborn child.

***2.2 Label elements**

***Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the GB CLP regulation.

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***Hazard pictograms**


GHS08

***Signal word Danger**
***Hazard-determining components of labelling:**

boric acid

***Hazard statements**

H360FD May damage fertility. May damage the unborn child.

***Precautionary statements**

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

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

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

***2.3 Other hazards**
***Results of PBT and vPvB assessment**
***PBT:** Not applicable.

***vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

***3.2 Mixtures**
***Description:** Mixture of substances listed below with nonhazardous additions.

***Dangerous components:**

CAS: 10043-35-3	boric acid	 Repr. 1B, H360FD	2.5-10%
EINECS: 233-139-2			

***SVHC**

CAS: 10043-35-3	boric acid
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SECTION 4: First aid measures

***4.1 Description of first aid measures**
***After inhalation:**

Provide fresh air, warmth and rest. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Obtain medical attention if any discomfort continues.

***After skin contact:** Generally the product does not irritate the skin.

***After eye contact:**

Promptly wash eyes with plenty of water for up to 15 minutes. Open eyes wide apart and rinse well to remove any contact lenses. Do not remove contact lenses by hand. Continue to rinse. Get medical attention if symptoms persist.

***After swallowing:** If symptoms persist consult doctor.

***4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

***4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

GB

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Trade name: BORIC ACID 4% WITH SHER INDICATOR
pH 4.65 ± 0.15 @ 20°C

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SECTION 5: Firefighting measures

***5.1 Extinguishing media**

***Suitable extinguishing agents:**

Indications shall be given whether any extinguishing media are inappropriate for a particular situation involving the substance or mixture

Use fire extinguishing methods suitable to surrounding conditions.

***5.2 Special hazards arising from the substance or mixture** *No further relevant information available.*

***5.3 Advice for firefighters**

***Protective equipment:**

Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Avoid run off to waterways and sewers

SECTION 6: Accidental release measures

***6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment as described in Section 8 below. Keep unprotected persons away.

***6.2 Environmental precautions:** *Do not allow to enter sewers/ surface or ground water.*

***6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

***6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

***7.1 Precautions for safe handling**

Keep receptacles tightly sealed.

No special precautions are necessary if used correctly.

***Information about fire - and explosion protection:** *No special measures required.*

***7.2 Conditions for safe storage, including any incompatibilities**

***Storage:**

***Requirements to be met by storerooms and receptacles:** *No special requirements.*

***Information about storage in one common storage facility:** *Not required.*

***Further information about storage conditions:** *None.*

***7.3 Specific end use(s)** *No further relevant information available.*

SECTION 8: Exposure controls/personal protection

***8.1 Control parameters**

***Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

***Additional information:** *The lists valid during the making were used as basis.*

***8.2 Exposure controls**

***Appropriate engineering controls** *No further data; see section 7.*

***Individual protection measures, such as personal protective equipment**

***General protective and hygienic measures:** *Wash hands before breaks and at the end of work.*

***Respiratory protection:**

Where risk assessment shows air-purifying respirators are appropriate use a respirator with multi-purpose combination (US) or type ABEK (EN14387) respirator cartridges as back up to engineering controls. Use

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respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

***Hand protection**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Always ensure that gloves are inspected before use.

Selection of protective gloves must include consideration of the penetration times along with rates of diffusion and degradation. The selected glove should comply with the specifications of EU Directive 89/686/EEC and the standard EN374 derived from it.

***Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

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

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

***Penetration time of glove material**

In the absence of data above, the exact break through time has to be sourced from the manufacturer of the protective gloves and has to be observed.

***Eye/face protection**



Goggles recommended during refilling: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU)

SECTION 9: Physical and chemical properties

***9.1 Information on basic physical and chemical properties**

***General Information**

***Physical state**

Liquid

***Colour:**

According to product specification

***Odour:**

Characteristic

***Odour threshold:**

Not determined.

***Melting point/freezing point:**

Undetermined.

***Boiling point or initial boiling point and boiling range**

100 °C

***Flammability**

Not applicable.

***Lower and upper explosion limit**

***Lower:**

Not determined.

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Trade name: BORIC ACID 4% WITH SHER INDICATOR
pH 4.65 ± 0.15 @ 20°C

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*Upper:	Not determined.
*Flash point:	Not applicable.
*Decomposition temperature:	Not determined.
*pH	Not determined.
*Viscosity:	
*Kinematic viscosity	Not determined.
*Dynamic:	Not determined.
*Solubility	
*water:	Not miscible or difficult to mix.
*Partition coefficient n-octanol/water (log value)	Not determined.
*Vapour pressure at 20 °C:	23 hPa
*Density and/or relative density	
*Density at 20 °C:	1.01741 g/cm ³
*Relative density	Not determined.
*Vapour density	Not determined.

***9.2 Other information**

*Appearance:	
*Form:	Liquid
*Important information on protection of health and environment, and on safety.	
*Ignition temperature:	Product is not selfigniting.
*Explosive properties:	Product does not present an explosion hazard.
*Solvent content:	
*Organic solvents:	0.0 %
*Change in condition	
*Evaporation rate	Not determined.

***Information with regard to physical hazard classes**

*Explosives	Void
*Flammable gases	Void
*Aerosols	Void
*Oxidising gases	Void
*Gases under pressure	Void
*Flammable liquids	Void
*Flammable solids	Void
*Self-reactive substances and mixtures	Void
*Pyrophoric liquids	Void
*Pyrophoric solids	Void
*Self-heating substances and mixtures	Void
*Substances and mixtures, which emit flammable gases in contact with water	Void
*Oxidising liquids	Void
*Oxidising solids	Void
*Organic peroxides	Void
*Corrosive to metals	Void
*Desensitised explosives	Void

SECTION 10: Stability and reactivity

- *10.1 Reactivity No further relevant information available.
- *10.2 Chemical stability
- *Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- *10.3 Possibility of hazardous reactions No dangerous reactions known.
- *10.4 Conditions to avoid No further relevant information available.
- *10.5 Incompatible materials: No further relevant information available.

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***10.6 Hazardous decomposition products:** No dangerous decomposition products known.

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SECTION 11: Toxicological information

***11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

***Acute toxicity** Based on available data, the classification criteria are not met.

***Reproductive toxicity** May damage fertility. May damage the unborn child.

***11.2 Information on other hazards**

***Endocrine disrupting properties**

None of the ingredients is listed.

SECTION 12: Ecological information

***12.1 Toxicity**

***Aquatic toxicity:** No further relevant information available.

***12.2 Persistence and degradability** No further relevant information available.

***12.3 Bioaccumulative potential** No further relevant information available.

***12.4 Mobility in soil** No further relevant information available.

***12.5 Results of PBT and vPvB assessment**

***PBT:** Not applicable.

***vPvB:** Not applicable.

***12.6 Endocrine disrupting properties**

The product does not contain substances with endocrine disrupting properties.

***12.7 Other adverse effects**

***Additional ecological information:**

***General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

SECTION 13: Disposal considerations

***13.1 Waste treatment methods**

***Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

***Uncleaned packaging:**

***Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

***14.1 UN number or ID number**

***ADR, IMDG, IATA** Void

***14.2 UN proper shipping name**

***ADR** Void

Void

***IMDG, IATA** Void

Void

***14.3 Transport hazard class(es)**

***ADR, IMDG, IATA**

***Class** Void

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*14.4 Packing group	Void
*ADR, IMDG, IATA	Void
*14.5 Environmental hazards:	Not applicable.
*14.6 Special precautions for user	Not applicable.
*14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
*UN "Model Regulation":	Void

SECTION 15: Regulatory information

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

*Regulated explosives precursors

None of the ingredients is listed.

*Regulated poisons

None of the ingredients is listed.

*Reportable explosives precursors

None of the ingredients is listed.

*Reportable poisons

CAS: 1310-73-2	sodium hydroxide	12% of total caustic alkalinity
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*Directive 2012/18/EU

*Named dangerous substances - ANNEX I None of the ingredients is listed.

*National regulations:

*Waterhazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

*Substances of very high concern (SVHC) according to UK REACH

CAS: 10043-35-3	boric acid
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*15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

*Relevant Phrases:

H360FD May damage fertility. May damage the unborn child.

*Department issuing SDS: Health and Safety

*Contact: sds@reagecon.ie

*Abbreviations and acronyms:

UK REACH (Registration, Evaluation, Authorisation and restriction of Chemicals)

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Repr. 1B: Reproductive toxicity – Category 1B

*NO



Product information

Boric Acid Solution



EN	Product information Dear customer, low temperatures during transportation can lead to crystallization of previously dissolved boric acid. Please check the pH-value (4.65 ± 0.15 at 20 °C) and the colour of the solution after opening. The boric acid can be dissolved again by stirring.
DE	Produktinformation Sehr geehrte Kundin, sehr geehrter Kunde, durch zu tiefe Temperaturen beim Transport kann es zum Auskristallisieren von zuvor gelöster Borsäure kommen. Bitte prüfen Sie den pH-Wert ($4,65 \pm 0,15$ bei 20 °C) und die Farbe der Lösung nach dem Öffnen. Durch erneutes Rühren kann die Borsäure wieder in Lösung gebracht werden.
FR	Information de produit Cher client, des températures trop basses pendant le transport peuvent conduire à la cristallisation de l'acide borique préalablement dissous. Vérifiez la valeur du pH ($4,65 \pm 0,15$ à 20 °C) et la couleur de la solution après ouverture. L'acide borique peut se dissoudre à nouveau en remuant.
IT	Informazioni sul prodotto Gentile cliente, eventuali temperature molto basse durante il trasporto possono provocare la cristallizzazione dell'acido borico precedentemente disciolto. Verificate il valore del pH (4.65 ± 0.15 a 20°C) e il colore della soluzione dopo l'apertura. Rimescolando è possibile dissolvere nuovamente l'acido borico.
ES	Información de producto Estimado cliente: las bajas temperaturas durante el transporte pueden provocar la cristalización del ácido bórico que se haya disuelto previamente. Compruebe el valor del pH ($4,65 \pm 0,15$ a 20 °C) y el color de la solución tras su apertura. El ácido bórico puede volver a disolverse removiéndolo.
ZH	产品信息 尊敬的客户： 运输期间低温会导致硼酸发生结晶现象。请在开盖前检测溶液的 pH 值 (20°C 时为 4.65 ± 0.15) 和颜色。通过搅拌即可溶解硼酸。

JA	<p>製品情報 お客様各位 輸送中に温度が下がると一度溶解したホウ酸が結晶化する可能性があります。pH値(20°Cあたり4.65 ± 0.15)と開封後の溶液の色を確認してください。結晶化したホウ酸は攪拌することで溶解させることができます。</p>
RU	<p>Информация о продукте Уважаемый клиент, транспортировка при низких температурах может вызвать кристаллизацию ранее растворенной борной кислоты. После вскрытия емкости проверьте значение pH ($4,65 \pm 0,15$ при 20°C) и цвет раствора. Повторно растворить борную кислоту можно путем перемешивания.</p>
KO	<p>제품 정보 운송 중 낮은 온도는 이전에 용해된 붕산의 결정화를 초래할 수 있습니다. 개봉 후 pH 값(20°C에서 4.65 ± 0.15)과 용액의 색을 확인하세요. 교반을 이용해 붕산을 다시 용해할 수 있습니다.</p>
TH	<p>ข้อมูลผลิตภัณฑ์ เรียน ท่านผู้มีอุปการคุณ อุณหภูมิที่ลดต่ำลงในระหว่างการขนส่งอาจทำให้กรดบอริกที่ละลายแล้วตกผลึกได้ โปรดตรวจสอบค่า pH (4.65 ± 0.15 ที่อุณหภูมิ 20°C) และสีของสารละลายหลังจากเปิดภาชนะบรรจุ และสามารถกวนกรดบอริกเพื่อให้ละลายอีกครั้งได้</p>
ID	<p>Informasi produk Pelanggan yang terhormat, temperatur rendah selama transpor dapat mengakibatkan kristalisasi dari asam borat terlarut sebelumnya. Periksa nilai pH ($4,65 \pm 0,15$ pada suhu 20°C) dan warna larutan setelah dibuka. Asam borat dapat dilarutkan kembali dengan pengadukan.</p>
PT-B	<p>Informações do produto Caro cliente, baixas temperatura durante o transporte podem causar a cristalização de ácido bórico previamente dissolvido. Verifique o valor do pH ($4,65 \pm 0,15$ em 20 °C) e a cor da solução após a abertura. O ácido bórico pode ser dissolvido após a agitação.</p>

