

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 02.05.2018

Revision: 02.05.2018

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

- **1.1 Product identifier**
- **Trade name: Borate Buffered Saline pH 8.2**
- **Article number:** 20-7800-10
- **Registration number** Mixture
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use** SU24 Scientific research and development
- **Product category** PC21 Laboratory chemicals
- **Application of the substance / the mixture** Buffer solution
- **Uses advised against**  
Processes involving extreme heat use advised against.  
Processes where workers who may be pregnant or breastfeeding could potentially come into direct contact with the undiluted product.  
The product is strictly intended for industrial or professional use only.
- **1.3 Details of the supplier of the safety data sheet**  
Severn Biotech Ltd.  
Unit 2,  
Park Lane,  
Kidderminster,  
Worcestershire.  
DY11 6TJ  
UK  
Tel: 0044 1562 825286  
Fax: 0044 1562 825284  
email: info@severnbiotech.com
- **Further information obtainable from:** Product safety department.
- **1.4 Emergency telephone number:** Tel: 0044 1562 825286 (not 24 hours)

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
The product is not classified, according to the CLP regulation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

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

- **Dangerous components:**

CAS: 1303-96-4 EINECS: 215-540-4	Disodium tetraborate, decahydrate ⚠ Repr. 1B, H360FD; ⚠ Acute Tox. 4, H332; Eye Irrit. 2, H319	<8.5% %
CAS: 10043-35-3 EINECS: 233-139-2	Boric acid ⚠ Repr. 1B, H360FD	<5.5% %

- **SVHC**

1303-96-4	Disodium tetraborate, decahydrate
10043-35-3	Boric acid

(Contd. on page 2)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 02.05.2018

Revision: 02.05.2018

**Trade name: Borate Buffered Saline pH 8.2**

(Contd. of page 1)

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**  
Immediately rinse with water.  
If skin irritation continues, consult a doctor.
- **After eye contact:**  
Check for and remove any contact lenses.  
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
Do not induce vomiting; call for medical help immediately.  
If vomiting occurs spontaneously, keep head below hips to prevent aspiration.
- **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **Information for doctor:** Treat symptomatically and supportively.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** 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:**  
Wear fully protective suit.  
Wear self-contained respiratory protective device.  
Do not inhale explosion gases or combustion gases.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Ensure adequate ventilation
- **6.2 Environmental precautions:**  
Do not allow to penetrate the ground/soil.  
Do not allow product to reach sewage system or any water course in the undiluted form.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Send for recovery or disposal in suitable receptacles.
- **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**  
Prevent formation of aerosols.  
Ensure good ventilation/exhaustion at the workplace.  
Avoid direct contact (skin/eye contact, ingestion and/or inhalation of fume/mist/dust) with the product in the undiluted form.

(Contd. on page 3)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 02.05.2018

Revision: 02.05.2018

**Trade name: Borate Buffered Saline pH 8.2**

(Contd. of page 2)

- **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:** Prevent any seepage into the ground.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:**
  - Protect from frost.
  - Store in cool, dry conditions in well sealed receptacles.
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **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**
- **Personal protective equipment:**
  - Select PPE appropriate for the operations taking place taking into account the product properties.
- **General protective and hygienic measures:**
  - Do not eat, drink, smoke or sniff while working.
  - Avoid close or long term contact with the skin.
  - Avoid contact with the eyes.
  - Do not inhale gases / fumes / aerosols.
  - Wash hands before breaks and at the end of work.
  - Pregnant women should strictly avoid inhalation or skin contact.
  - A safe system of work must be formulated and followed to ensure that workers who may be pregnant or breastfeeding do not come into direct contact with the product.
- **Respiratory protection:**
  - Use suitable respiratory protective device in case of insufficient ventilation.
  - Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
  - If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.
- **Protection of hands:**
  - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
  - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
  - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**
  - Safety glasses
  - Goggles recommended during refilling
- **Body protection:**
  - Impervious protective clothing
  - Body protection must be chosen depending on product properties, activity and possible exposure.

GB

(Contd. on page 4)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 02.05.2018

Revision: 02.05.2018

Trade name: Borate Buffered Saline pH 8.2

(Contd. of page 3)

### SECTION 9: Physical and chemical properties

#### · 9.1 Information on basic physical and chemical properties

##### · General Information

##### · Appearance:

    Form: Fluid

    Colour: Clear

· Odour: Mild

· Odour threshold: Not determined.

· pH-value: 8.2

##### · Change in condition

    Melting point/freezing point: Undetermined.

    Initial boiling point and boiling range: Undetermined.

· Flash point: Not applicable.

· Flammability (solid, gas): Not applicable.

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not self-igniting.

· Explosive properties: Product does not present an explosion hazard.

##### · Explosion limits:

    Lower: Not determined.

    Upper: Not determined.

· Vapour pressure at 20 °C: 23 hPa

· Density at 20 °C: 1.1 g/cm<sup>3</sup>

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

##### · Solubility in / Miscibility with water:

Fully miscible.

· Partition coefficient: n-octanol/water: Not determined.

##### · Viscosity:

    Dynamic: Not determined.

    Kinematic: Not determined.

##### · 9.2 Other information

NOTE: The physical data presented above are typical values and should not be construed as a specification.

### 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 and stored 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:

Strong oxidising agents.

Reducing agents.

Strong acids, metallic salts, alkaloid salts.

GB

(Contd. on page 5)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 02.05.2018

Revision: 02.05.2018

Trade name: Borate Buffered Saline pH 8.2

(Contd. of page 4)

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

- **LD/LC50 values relevant for classification:**

#### 1303-96-4 Disodium tetraborate, decahydrate

Oral	LD50	>2000 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rabbit)
Inhalative	LC50/4 h	>2.04 mg/l (rat)

#### 10043-35-3 Boric acid

Oral	LD50	>2000 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rat)
Inhalative	LC50/4 h	>2.03 mg/l (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:**

#### 1303-96-4 Disodium tetraborate, decahydrate

EC50	133 mg/kg (daphnia)
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- **12.2 Persistence and degradability** The organic portion of the product is biodegradable.
- **12.3 Bioaccumulative potential** Product is not expected to bioaccumulate.
- **12.4 Mobility in soil** No further relevant information available.
- **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.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Recommended Hierarchy of Controls:
  - Minimise waste;
  - Reuse if not contaminated;
  - Recycle, if possible; or
  - Safe disposal (if all else fails).

(Contd. on page 6)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 02.05.2018

Revision: 02.05.2018

**Trade name: Borate Buffered Saline pH 8.2**

(Contd. of page 5)

Contact waste processors for recycling information.

Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.

- **European waste catalogue**

Waste key numbers in accordance with the European Waste Catalogue (EWC) are origin-referred defined. Since this product is used in several industries, no waste key can be provided by the supplier. The waste key number should be determined in arrangement with your waste disposal partner or the responsible authority.

- **Uncleaned packaging:**

- **Recommendation:**

Disposal must be made according to official regulations.

Container remains hazardous when empty. Continue to observe all precautions.

Containers, even those that are "empty," may contain residues that can develop hazardous gases and vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

· <b>14.1 UN-Number</b>	Void
· <b>ADR, ADN, IMDG, IATA</b>	Void
· <b>14.2 UN proper shipping name</b>	Void
· <b>ADR, ADN, IMDG, IATA</b>	Void
· <b>14.3 Transport hazard class(es)</b>	Void
· <b>ADR, ADN, IMDG, IATA</b>	
· <b>Class</b>	Void
· <b>14.4 Packing group</b>	Void
· <b>ADR, IMDG, IATA</b>	Void
· <b>14.5 Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>14.6 Special precautions for user</b>	Not applicable.
· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	Not dangerous according to the above specifications.
· <b>UN "Model Regulation":</b>	Void

### SECTION 15: Regulatory information

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

- **National regulations:**

- **Other regulations, limitations and prohibitive regulations**

- **Substances of very high concern (SVHC) according to REACH, Article 57**

1303-96-4	Disodium tetraborate, decahydrate
10043-35-3	Boric acid

- **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.

(Contd. on page 7)

# Safety data sheet

## according to 1907/2006/EC, Article 31

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Revision: 02.05.2018

**Trade name: Borate Buffered Saline pH 8.2**

(Contd. of page 6)

- **Relevant phrases**

- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H360FD May damage fertility. May damage the unborn child.

- **Abbreviations and acronyms:**

- ADR: Accord européen sur le transport 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)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- SVHC: Substances of Very High Concern
- vPvB: very Persistent and very Bioaccumulative
- Acute Tox. 4: Acute toxicity – Category 4
- Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- Repr. 1B: Reproductive toxicity – Category 1B

### Annex: Exposure scenario

- **Description of the activities / processes covered in the Exposure Scenario**

See section 1 of the annex to the Safety Data Sheet.

- **Conditions of use**

- **Duration and frequency** 5 workdays/week.

- **Physical parameters**

- **Physical state** Fluid

- **Concentration of the substance in the mixture** The substance is main component.

- **Other operational conditions**

- **Other operational conditions affecting environmental exposure** No special measures required.

- **Other operational conditions affecting worker exposure**

- Avoid contact with the skin.
- Do not breathe gas/vapour/aerosol.

- **Other operational conditions affecting consumer exposure**

- Keep out of the reach of children.
- Not required.

- **Other operational conditions affecting consumer exposure during the use of the product** Not applicable.

- **Risk management measures**

- **Worker protection**

- **Organisational protective measures** No special measures required.

- **Technical protective measures** Ensure that suitable extractors are available on processing machines

- **Personal protective measures**

- Do not inhale gases / fumes / aerosols.
- Avoid contact with the skin.
- Use suitable respiratory protective device in case of insufficient ventilation.
- Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.
- The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
- Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- No special measures required.

- **Measures for consumer protection**

- Ensure adequate labelling.
- Keep locked up and out of the reach of children.

- **Environmental protection measures**

- **Air** No special measures required.

(Contd. on page 8)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 02.05.2018

Revision: 02.05.2018

**Trade name: Borate Buffered Saline pH 8.2**

(Contd. of page 7)

- **Water** No special measures required.
- **Disposal measures**  
Disposal must be made according to official regulations.  
Ensure that waste is collected and contained.
- **Disposal procedures**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.  
Dispose of product residues with household waste.
- **Waste type** Partially emptied and uncleaned packaging
- **Exposure estimation**
- **Consumer** Not relevant for this Exposure Scenario.
- **Guidance for downstream users** No further relevant information available.

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