



## 10B10 7-4 Boron (10µg/mL in H<sub>2</sub>O)

### High-Purity Standards

Catalogue number: 10B10 7-4 Boron (10µg/mL in H<sub>2</sub>O)

Version No: 1.1

Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Chemwatch Hazard Alert Code: 0

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S.GHS.USA.EN

## SECTION 1 IDENTIFICATION

### Product Identifier

|                               |   |
|-------------------------------|---|
| Product name                  | 10B10 7-4 Boron (10µg/mL in H <sub>2</sub> O) |
| Chemical Name                 | water   |
| Synonyms                      | Not Available                                 |
| Other means of identification | 10B10 7-4 Boron (10µg/mL in H <sub>2</sub> O) |

### Recommended use of the chemical and restrictions on use

|                          |   |
|--------------------------|---|
| Relevant identified uses | Use according to manufacturer's directions. |
|--------------------------|---|

### Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

|                         |                                     |
|-------------------------|-------------------------------------|
| Registered company name | High-Purity Standards               |
| Address                 | PO Box 41727 SC 29423 United States |
| Telephone               | 843-767-7900                        |
| Fax                     | 843-767-7906                        |
| Website                 | highpuritystandards.com             |
| Email                   | Not Available                       |

### Emergency phone number

|                                   |                |
|-----------------------------------|----------------|
| Association / Organisation        | INFOTRAC       |
| Emergency telephone numbers       | 1-800-535-5053 |
| Other emergency telephone numbers | 1-352-323-3500 |

## SECTION 2 HAZARD(S) IDENTIFICATION

### Classification of the substance or mixture

|                |                |
|----------------|----------------|
| Classification | Not Applicable |
|----------------|----------------|

### Label elements

|                     |                |
|---------------------|----------------|
| Hazard pictogram(s) | Not Applicable |
|---------------------|----------------|

|             |                |
|-------------|----------------|
| SIGNAL WORD | NOT APPLICABLE |
|-------------|----------------|

### Hazard statement(s)

Not Applicable

### Hazard(s) not otherwise specified

Not Applicable

### Precautionary statement(s) Prevention

Not Applicable

### Precautionary statement(s) Response

Not Applicable

Continued...

**Precautionary statement(s) Storage**

Not Applicable

**Precautionary statement(s) Disposal**

Not Applicable

**SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS****Substances**

See section below for composition of Mixtures

**Mixtures**

| CAS No     | %[weight] | Name            |
|------------|-----------|-----------------|
| 14798-12-0 | 0.001     | <u>boron-10</u> |
| 7732-18-5  | 99.999    | <u>water</u>    |

**SECTION 4 FIRST-AID MEASURES****Description of first aid measures**

|                     |   |
|---------------------|---|
| <b>Eye Contact</b>  | <p>If this product comes in contact with eyes:</p> <ul style="list-style-type: none"> <li>▶ Wash out immediately with water.</li> <li>▶ If irritation continues, seek medical attention.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>  |
| <b>Skin Contact</b> | <p>If skin or hair contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Flush skin and hair with running water (and soap if available).</li> <li>▶ Seek medical attention in event of irritation.</li> </ul> <p>For thermal burns:</p> <ul style="list-style-type: none"> <li>▶ Decontaminate area around burn.</li> <li>▶ Consider the use of cold packs and topical antibiotics.</li> </ul> <p>For first-degree burns (affecting top layer of skin)</p> <ul style="list-style-type: none"> <li>▶ Hold burned skin under cool (not cold) running water or immerse in cool water until pain subsides.</li> <li>▶ Use compresses if running water is not available.</li> <li>▶ Cover with sterile non-adhesive bandage or clean cloth.</li> <li>▶ Do NOT apply butter or ointments; this may cause infection.</li> <li>▶ Give over-the counter pain relievers if pain increases or swelling, redness, fever occur.</li> </ul> <p>For second-degree burns (affecting top two layers of skin)</p> <ul style="list-style-type: none"> <li>▶ Cool the burn by immerse in cold running water for 10-15 minutes.</li> <li>▶ Use compresses if running water is not available.</li> <li>▶ Do NOT apply ice as this may lower body temperature and cause further damage.</li> <li>▶ Do NOT break blisters or apply butter or ointments; this may cause infection.</li> </ul> <p>Protect burn by cover loosely with sterile, nonstick bandage and secure in place with gauze or tape.</p> <p>To prevent shock: (unless the person has a head, neck, or leg injury, or it would cause discomfort):</p> <ul style="list-style-type: none"> <li>▶ Lay the person flat.</li> <li>▶ Elevate feet about 12 inches.</li> <li>▶ Elevate burn area above heart level, if possible.</li> <li>▶ Cover the person with coat or blanket.</li> <li>▶ Seek medical assistance.</li> </ul> <p>For third-degree burns</p> <p>Seek immediate medical or emergency assistance.</p> <p>In the mean time:</p> <ul style="list-style-type: none"> <li>▶ Protect burn area cover loosely with sterile, nonstick bandage or, for large areas, a sheet or other material that will not leave lint in wound.</li> <li>▶ Separate burned toes and fingers with dry, sterile dressings.</li> <li>▶ Do not soak burn in water or apply ointments or butter; this may cause infection.</li> <li>▶ To prevent shock see above.</li> <li>▶ For an airway burn, do not place pillow under the person's head when the person is lying down. This can close the airway.</li> <li>▶ Have a person with a facial burn sit up.</li> <li>▶ Check pulse and breathing to monitor for shock until emergency help arrives.</li> </ul> |
| <b>Inhalation</b>   | <ul style="list-style-type: none"> <li>▶ If fumes, aerosols or combustion products are inhaled remove from contaminated area.</li> <li>▶ Other measures are usually unnecessary.</li> </ul>   |
| <b>Ingestion</b>    | <ul style="list-style-type: none"> <li>▶ Immediately give a glass of water.</li> <li>▶ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.</li> </ul>   |

**Most important symptoms and effects, both acute and delayed**

See Section 11

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

Treat symptomatically.

**SECTION 5 FIRE-FIGHTING MEASURES****Extinguishing media**

- ▶ There is no restriction on the type of extinguisher which may be used.
- ▶ Use extinguishing media suitable for surrounding area.

**Special hazards arising from the substrate or mixture**

Continued...

10B10 7-4 Boron (10µg/mL in H<sub>2</sub>O)

|                             |             |
|-----------------------------|-------------|
| <b>Fire Incompatibility</b> | None known. |
|-----------------------------|-------------|

**Special protective equipment and precautions for fire-fighters**

|                              |   |
|------------------------------|---|
| <b>Fire Fighting</b>         | ▶ Alert Fire Brigade and tell them location and nature of hazard. |
| <b>Fire/Explosion Hazard</b> | ▶ Non combustible.  |

**SECTION 6 ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

See section 8

**Environmental precautions**

See section 12

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

|                     |                                    |
|---------------------|------------------------------------|
| <b>Minor Spills</b> | ▶ Clean up all spills immediately. |
| <b>Major Spills</b> | Minor hazard.                      |

Personal Protective Equipment advice is contained in Section 8 of the SDS.

**SECTION 7 HANDLING AND STORAGE****Precautions for safe handling**

|                          |   |
|--------------------------|---|
| <b>Safe handling</b>     | ▶ Limit all unnecessary personal contact. |
| <b>Other information</b> |   |

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

|                                |   |
|--------------------------------|---|
| <b>Suitable container</b>      | ▶ Polyethylene or polypropylene container.                            |
| <b>Storage incompatibility</b> | Avoid contamination of water, foodstuffs, feed or seed.<br>None known |

**SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION****Control parameters****OCCUPATIONAL EXPOSURE LIMITS (OEL)****INGREDIENT DATA**

Not Available

**EMERGENCY LIMITS**

| Ingredient                                    | Material name | TEEL-1        | TEEL-2        | TEEL-3        |
|---|---------------|---------------|---------------|---------------|
| 10B10 7-4 Boron (10µg/mL in H <sub>2</sub> O) | Not Available | Not Available | Not Available | Not Available |

| Ingredient | Original IDLH | Revised IDLH  |
|------------|---------------|---------------|
| boron-10   | Not Available | Not Available |
| water      | Not Available | Not Available |

**Exposure controls**

|   |  |
|---|--|
| <b>Appropriate engineering controls</b> | Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. |
|---|--|

**Personal protection**

|                                |  |
|--------------------------------|--|
| <b>Eye and face protection</b> | ▶ Safety glasses with side shields<br>▶ Chemical goggles.  |
| <b>Skin protection</b>         | See Hand protection below  |
| <b>Hands/feet protection</b>   | Wear general protective gloves, eg. light weight rubber gloves.<br>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. |
| <b>Body protection</b>         | See Other protection below   |
| <b>Other protection</b>        | No special equipment needed when handling small quantities.  |
| <b>Thermal hazards</b>         | Not Available  |

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

Continued...

## Information on basic physical and chemical properties

|  |               |   |               |
|--|---------------|---|---------------|
| Appearance                                   | Colourless    |   |               |
| Physical state                               | Liquid        | Relative density (Water = 1)            | Not Available |
| Odour  | Not Available | Partition coefficient n-octanol / water | Not Available |
| Odour threshold                              | Not Available | Auto-ignition temperature (°C)          | Not Available |
| pH (as supplied)                             | Not Available | Decomposition temperature               | Not Available |
| Melting point / freezing point (°C)          | Not Available | Viscosity (cSt)                         | Not Available |
| Initial boiling point and boiling range (°C) | Not Available | Molecular weight (g/mol)                | Not Available |
| Flash point (°C)                             | Not Available | Taste                                   | Not Available |
| Evaporation rate                             | Not Available | Explosive properties                    | Not Available |
| Flammability                                 | Not Available | Oxidising properties                    | Not Available |
| Upper Explosive Limit (%)                    | Not Available | Surface Tension (dyn/cm or mN/m)        | Not Available |
| Lower Explosive Limit (%)                    | Not Available | Volatile Component (%vol)               | Not Available |
| Vapour pressure (kPa)                        | Not Available | Gas group                               | Not Available |
| Solubility in water (g/L)                    | Miscible      | pH as a solution (1%)                   | Not Available |
| Vapour density (Air = 1)                     | Not Available | VOC g/L                                 | Not Available |

## SECTION 10 STABILITY AND REACTIVITY

|                                    |   |
|------------------------------------|---|
| Reactivity                         | See section 7   |
| Chemical stability                 | Product is considered stable and hazardous polymerisation will not occur. |
| Possibility of hazardous reactions | See section 7   |
| Conditions to avoid                | See section 7   |
| Incompatible materials             | See section 7   |
| Hazardous decomposition products   | See section 5   |

## SECTION 11 TOXICOLOGICAL INFORMATION

## Information on toxicological effects

|              |  |
|--------------|--|
| Inhaled      | The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Not normally a hazard due to non-volatile nature of product                 |
| Ingestion    | The material has <b>NOT</b> been classified by EC Directives or other classification systems as "harmful by ingestion".  |
| Skin Contact | The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models).   |
| Eye          | Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).               |
| Chronic      | Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course. |

|   |               |               |
|---|---------------|---------------|
| 10B10 7-4 Boron (10µg/mL in H <sub>2</sub> O) | TOXICITY      | IRRITATION    |
|   | Not Available | Not Available |
| boron-10                                      | TOXICITY      | IRRITATION    |
|   | Not Available | Not Available |
| water   | TOXICITY      | IRRITATION    |
|   | Not Available | Not Available |

**Legend:** 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. \* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

|                           |  |                 |   |
|---------------------------|--|-----------------|---|
| WATER                     | No significant acute toxicological data identified in literature search. |                 |   |
| Acute Toxicity            | ☉  | Carcinogenicity | ☉ |
| Skin Irritation/Corrosion | ☉  | Reproductivity  | ☉ |

Continued...

## 10B10 7-4 Boron (10µg/mL in H2O)

|                                   |   |                          |   |
|-----------------------------------|---|--------------------------|---|
| Serious Eye Damage/Irritation     | ⊖ | STOT - Single Exposure   | ⊖ |
| Respiratory or Skin sensitisation | ⊖ | STOT - Repeated Exposure | ⊖ |
| Mutagenicity                      | ⊖ | Aspiration Hazard        | ⊖ |

Legend:   
 ✖ – Data available but does not fill the criteria for classification  
 ✔ – Data available to make classification  
 ⊖ – Data Not Available to make classification

## SECTION 12 ECOLOGICAL INFORMATION

## Toxicity

| 10B10 7-4 Boron (10µg/mL in H2O)   | ENDPOINT       | TEST DURATION (HR) | SPECIES                       | VALUE          | SOURCE         |
|--|----------------|--------------------|-------------------------------|----------------|----------------|
|  | Not Applicable | Not Applicable     | Not Applicable                | Not Applicable | Not Applicable |
| boron-10   | ENDPOINT       | TEST DURATION (HR) | SPECIES                       | VALUE          | SOURCE         |
|  | Not Applicable | Not Applicable     | Not Applicable                | Not Applicable | Not Applicable |
| water  | ENDPOINT       | TEST DURATION (HR) | SPECIES                       | VALUE          | SOURCE         |
|  | LC50           | 96                 | Fish                          | 897.520mg/L    | 3              |
|  | EC50           | 96                 | Algae or other aquatic plants | 8768.874mg/L   | 3              |
| <b>Legend:</b> Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data |                |                    |                               |                |                |

## Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|------------|-------------------------|------------------|
| water      | LOW                     | LOW              |

## Bioaccumulative potential

| Ingredient | Bioaccumulation      |
|------------|----------------------|
| water      | LOW (LogKOW = -1.38) |

## Mobility in soil

| Ingredient | Mobility         |
|------------|------------------|
| water      | LOW (KOC = 14.3) |

## SECTION 13 DISPOSAL CONSIDERATIONS

## Waste treatment methods

|                              |  |
|------------------------------|--|
| Product / Packaging disposal | Legislation addressing waste disposal requirements may differ by country, state and/ or territory.<br>▶ <b>DO NOT</b> allow wash water from cleaning or process equipment to enter drains.<br>▶ Recycle wherever possible. |
|------------------------------|--|

## SECTION 14 TRANSPORT INFORMATION

## Labels Required

|                  |    |
|------------------|----|
| Marine Pollutant | NO |
|------------------|----|

Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

## SECTION 15 REGULATORY INFORMATION

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

BORON-10(14798-12-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Continued...

Not Applicable

**WATER(7732-18-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

US - Pennsylvania - Hazardous Substance List

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

**Federal Regulations****Superfund Amendments and Reauthorization Act of 1986 (SARA)****SECTION 311/312 HAZARD CATEGORIES**

|                                 |    |
|---------------------------------|----|
| Immediate (acute) health hazard | No |
| Delayed (chronic) health hazard | No |
| Fire hazard                     | No |
| Pressure hazard                 | No |
| Reactivity hazard               | No |

**US. EPA CERCLA HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES (40 CFR 302.4)**

None Reported

**State Regulations****US. CALIFORNIA PROPOSITION 65**

None Reported

| National Inventory            | Status   |
|-------------------------------|--|
| Australia - AICS              | N (boron-10)   |
| Canada - DSL                  | N (boron-10)   |
| Canada - NDSL                 | N (boron-10; water)  |
| China - IECSC                 | N (boron-10)   |
| Europe - EINEC / ELINCS / NLP | N (boron-10)   |
| Japan - ENCS                  | N (boron-10)   |
| Korea - KECI                  | N (boron-10)   |
| New Zealand - NZIoC           | N (boron-10)   |
| Philippines - PICCS           | N (boron-10)   |
| USA - TSCA                    | N (boron-10)   |
| <b>Legend:</b>                | <i>Y = All ingredients are on the inventory</i><br><i>N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)</i> |

**SECTION 16 OTHER INFORMATION****Other information**

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment.

**Definitions and abbreviations**

PC — TWA: Permissible Concentration-Time Weighted Average  
PC — STEL: Permissible Concentration-Short Term Exposure Limit  
IARC: International Agency for Research on Cancer  
ACGIH: American Conference of Governmental Industrial Hygienists  
STEL: Short Term Exposure Limit  
TEEL: Temporary Emergency Exposure Limit.  
IDLH: Immediately Dangerous to Life or Health Concentrations  
OSF: Odour Safety Factor  
NOAEL :No Observed Adverse Effect Level  
LOAEL: Lowest Observed Adverse Effect Level  
TLV: Threshold Limit Value  
LOD: Limit Of Detection  
OTV: Odour Threshold Value  
BCF: BioConcentration Factors  
BEI: Biological Exposure Index

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