

## SAFETY DATA SHEET

Creation Date 28-January-2010

Revision Date 17-January-2018

Revision Number 3

### 1. Identification

**Product Name** Buffer Solution, pH 10.00, Color-Coded Blue

**Cat No. :** SB115-4, SB115-20, SB115-500

**Synonyms** No information available

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Not for food, drug, pesticide or biocidal product use

#### Details of the supplier of the safety data sheet

##### Company

**Importer/Distributor**  
Fisher Scientific  
112 Colonnade Road,  
Ottawa, ON K2E 7L6,  
Canada  
Tel: 1-800-234-7437

##### **Manufacturer**

Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

#### **Emergency Telephone Number**

CHEMTREC®, Inside the USA: 800-424-9300  
CHEMTREC®, Outside the USA: 001-703-527-3887

### 2. Hazard(s) identification

#### Classification

**WHMIS 2015 Classification** Not classified under the Hazardous Products Regulations (SOR/2015-17)

Based on available data, the classification criteria are not met

#### Label Elements

None required

### 3. Composition/Information on Ingredients

| Component  | CAS-No    | Weight % |
|--|-----------|----------|
| Water  | 7732-18-5 | 97.78    |
| Ethylenediaminetetraacetic acid, disodium salt dihydrate | 6381-92-6 | 1.0      |
| Potassium carbonate                                      | 584-08-7  | 0.6      |
| Boron potassium oxide (B4K2O7)                           | 1332-77-0 | 0.4      |
| Potassium hydroxide                                      | 1310-58-3 | 0.2      |

#### 4. First-aid measures

|   |   |
|---|---|
| <b>Eye Contact</b>  | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.         |
| <b>Skin Contact</b>   | Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur. |
| <b>Inhalation</b>   | Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.         |
| <b>Ingestion</b>  | Do not induce vomiting. Obtain medical attention.   |
| <b>Most important symptoms/effects<br/>Notes to Physician</b> | No information available.<br>Treat symptomatically  |

#### 5. Fire-fighting measures

|   |   |
|---|---|
| <b>Suitable Extinguishing Media</b>     | Substance is nonflammable; use agent most appropriate to extinguish surrounding fire. |
| <b>Unsuitable Extinguishing Media</b>   | No information available  |
| <b>Flash Point</b>                      | No information available  |
| <b>Method -</b>                         | No information available  |
| <b>Autoignition Temperature</b>         | No information available  |
| <b>Explosion Limits</b>                 |   |
| <b>Upper</b>                            | No data available   |
| <b>Lower</b>                            | No data available   |
| <b>Sensitivity to Mechanical Impact</b> | No information available  |
| <b>Sensitivity to Static Discharge</b>  | No information available  |

#### Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors.

#### Hazardous Combustion Products

Thermal decomposition can lead to release of irritating gases and vapors

#### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### NFPA

|               |                     |                    |                         |
|---------------|---------------------|--------------------|-------------------------|
| <b>Health</b> | <b>Flammability</b> | <b>Instability</b> | <b>Physical hazards</b> |
| 1             | 0                   | 0                  | N/A                     |

#### 6. Accidental release measures

|                                  |   |
|----------------------------------|---|
| <b>Personal Precautions</b>      | Use personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. |
| <b>Environmental Precautions</b> | Should not be released into the environment. See Section 12 for additional ecological information.          |

**Methods for Containment and Clean Up** Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

#### 7. Handling and storage

|                 |   |
|-----------------|---|
| <b>Handling</b> | Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. |
| <b>Storage</b>  | Keep containers tightly closed in a dry, cool and well-ventilated place.  |

## 8. Exposure controls / personal protection

### Exposure Guidelines

| Component                      | Alberta                      | British Columbia                                      | Ontario TWAEV            | Quebec                       | ACGIH TLV   | OSHA PEL                                  | NIOSH IDLH                   |
|--------------------------------|------------------------------|---|--------------------------|------------------------------|---|---|------------------------------|
| Boron potassium oxide (B4K2O7) |                              | TWA: 2 mg/m <sup>3</sup><br>STEL: 6 mg/m <sup>3</sup> |                          |                              | TWA: 2 mg/m <sup>3</sup><br>STEL: 6 mg/m <sup>3</sup> |   |                              |
| Potassium hydroxide            | Ceiling: 2 mg/m <sup>3</sup> | Ceiling: 2 mg/m <sup>3</sup>                          | CEV: 2 mg/m <sup>3</sup> | Ceiling: 2 mg/m <sup>3</sup> | Ceiling: 2 mg/m <sup>3</sup>                          | (Vacated)<br>Ceiling: 2 mg/m <sup>3</sup> | Ceiling: 2 mg/m <sup>3</sup> |

### Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

### Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

### Personal protective equipment

#### **Eye Protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

#### **Hand Protection**

Wear appropriate protective gloves and clothing to prevent skin exposure.

| Glove material | Breakthrough time                 | Glove thickness | Glove comments         |
|----------------|-----------------------------------|-----------------|------------------------|
| Nitrile rubber | See manufacturers recommendations | -               | Splash protection only |

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

#### **Respiratory Protection**

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

When RPE is used a face piece Fit Test should be conducted

### Environmental exposure controls

No information available.

### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday.

## 9. Physical and chemical properties

|                       |          |
|-----------------------|----------|
| <b>Physical State</b> | Liquid   |
| <b>Appearance</b>     | Blue     |
| <b>Odor</b>           | Odorless |

|  |                          |
|--|--------------------------|
| Odor Threshold                         | No information available |
| pH                                     | 10.0                     |
| Melting Point/Range                    | 0 °C / 32 °F             |
| Boiling Point/Range                    | 100 °C / 212 °F          |
| Flash Point                            | No information available |
| Evaporation Rate                       | > 1 (Water = 1.0)        |
| Flammability (solid,gas)               | No information available |
| Flammability or explosive limits       |                          |
| Upper                                  | No data available        |
| Lower                                  | No data available        |
| Vapor Pressure                         | No information available |
| Vapor Density                          | No information available |
| Specific Gravity                       | 1.013 @ 25°C             |
| Solubility                             | Soluble in water         |
| Partition coefficient; n-octanol/water | No data available        |
| Autoignition Temperature               | No information available |
| Decomposition Temperature              | No information available |
| Viscosity                              | No information available |

## 10. Stability and reactivity

|   |  |
|---|--|
| <b>Reactive Hazard</b>                  | None known, based on information available                               |
| <b>Stability</b>                        | Stable under normal conditions.  |
| <b>Conditions to Avoid</b>              | Excess heat.   |
| <b>Incompatible Materials</b>           | None known   |
| <b>Hazardous Decomposition Products</b> | Thermal decomposition can lead to release of irritating gases and vapors |
| <b>Hazardous Polymerization</b>         | Hazardous polymerization does not occur.                                 |
| <b>Hazardous Reactions</b>              | None under normal processing.  |

## 11. Toxicological information

### Acute Toxicity

**Product Information** No acute toxicity information is available for this product

### **Component Information**

| Component           | LD50 Oral                | LD50 Dermal | LC50 Inhalation |
|---------------------|--------------------------|-------------|-----------------|
| Water               | -                        | Not listed  | Not listed      |
| Potassium carbonate | > 2000 mg/kg ( Rat )     | Not listed  | Not listed      |
| Potassium hydroxide | LD50 = 284 mg/kg ( Rat ) | Not listed  | Not listed      |

**Toxicologically Synergistic Products** No information available

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Irritation** No information available

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component  | CAS-No    | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|--|-----------|------------|------------|------------|------------|------------|
| Water  | 7732-18-5 | Not listed | Not listed | Not listed | Not listed | Not listed |
| Ethylenediaminetetraacetic acid, disodium salt dihydrate | 6381-92-6 | Not listed | Not listed | Not listed | Not listed | Not listed |

|                                |           |            |            |            |            |            |
|--------------------------------|-----------|------------|------------|------------|------------|------------|
| Potassium carbonate            | 584-08-7  | Not listed | Not listed | Not listed | Not listed | Not listed |
| Boron potassium oxide (B4K2O7) | 1332-77-0 | Not listed | Not listed | Not listed | Not listed | Not listed |
| Potassium hydroxide            | 1310-58-3 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** None known  
**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects,both acute and delayed** No information available

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

## 12. Ecological information

**Ecotoxicity**  
 Do not empty into drains.

| Component           | Freshwater Algae | Freshwater Fish                                | Microtox   | Water Flea |
|---------------------|------------------|--|------------|------------|
| Potassium carbonate | Not listed       | LC50 <510 mg/L/96h (Pimephales promelas)       | Not listed | Not listed |
| Potassium hydroxide | Not listed       | LC50: = 80 mg/L, 96h static (Gambusia affinis) | Not listed | Not listed |

**Persistence and Degradability** No information available

**Bioaccumulation/ Accumulation** No information available.

**Mobility** .

| Component           | log Pow |
|---------------------|---------|
| Potassium hydroxide | 0.83    |

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

**DOT** Not regulated  
**TDG** Not regulated  
**IATA** Not regulated  
**IMDG/IMO** Not regulated

## 15. Regulatory information

**International Inventories**

| Component | DSL | NDSL | TSCA | EINECS | ELINCS | NLP | PICCS | ENCS | AICS | IECSC | KECL |
|-----------|-----|------|------|--------|--------|-----|-------|------|------|-------|------|
|           |     |      |      |        |        |     |       |      |      |       |      |

|  |   |   |   |           |   |  |   |   |   |   |   |
|--|---|---|---|-----------|---|--|---|---|---|---|---|
| Water  | X | - | X | 231-791-2 | - |  | X | - | X | X | X |
| Ethylenediaminetetraacetic acid, disodium salt dihydrate | X | - | - | -         | - |  | X | - | X | X | - |
| Potassium carbonate                                      | X | - | X | 209-529-3 | - |  | X | X | X | X | X |
| Boron potassium oxide (B4K2O7)                           | X | - | X | 215-575-5 | - |  | X | - | X | X | X |
| Potassium hydroxide                                      | X | - | X | 215-181-3 | - |  | X | X | X | X | X |

### Canada

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and meets the requirements of the HPR (Paragraph 13(1)(a) of the Hazardous Products Act (HPA)).

## 16. Other information

### Prepared By

Regulatory Affairs  
Thermo Fisher Scientific  
Email: EMSDS.RA@thermofisher.com

### Creation Date

28-January-2010

### Revision Date

17-January-2018

### Print Date

17-January-2018

### Revision Summary

This document has been updated to comply with the requirements of WHMIS 2015 to align with the Globally Harmonised System (GHS) for the Classification and Labelling of Chemicals.

### Disclaimer

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 a 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

**End of SDS**