

# MATERIAL SAFETY DATA SHEET

|                      |             |   |
|----------------------|-------------|---|
| <b>Version</b>       | 2.0         | <b>Issue Date</b> 14 Jul 2011                 |
| <b>Revision Date</b> | 10 Nov 2010 |   |
| <b>Supersedes</b>    | 23 Mar 2010 | <b>American National Standard ANSI Z400.1</b> |

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND COMPANY

**Product Name** TRIS BUFFER SOLUTIONS (0.05 M, 0.1 M, 0.25 M)  
**Brand:** Endosafe  
**Product Codes** BT101, BT103, BT104, BT105, BT106

**Intended Use** R&D/Experimental use only

**Manufacturer** Charles River  
**Division** Endotoxin and Microbial Detection  
**Address** 1023 Wappoo Rd  
 Suite 43-B  
 Charleston, SC 29407

**Telephone** (843) 402-4900  
**Emergency** (843) 402-4900

## SECTION 2: HAZARDS IDENTIFICATION

### Emergency Overview

**OSHA Hazards** Irritant  
**NFPA Rating** Health = 1, Fire = 0, Instability = 0  
**HMIS Classification** Health = 1, Flammability = 0, Physical hazards = 0

### Potential Health Effects

**Eyes** May cause eye irritation  
**Skin** May be harmful if absorbed through skin, may cause skin irritation.  
**Inhalation** May be harmful if inhaled, may cause respiratory tract irritation.  
**Ingestion** May be harmful if swallowed.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| Components   | CAS#      | RTECS#    | EC#       | Concentration, % |
|--|-----------|-----------|-----------|------------------|
| Water  | 7732-18-5 | ZC0110000 | 231-791-2 | > 96             |
| Tris (hydroxymethyl) aminomethane                        | 77-86-1   | TY2900000 | 201-064-4 | < 3              |
| 2-Amino-2-(hydroxymethyl)-1, 3-propanediol hydrochloride | 1185-53-1 |           | 214-684-5 | < 1.4            |

#### SECTION 4: FIRST AID MEASURES

|                     |   |
|---------------------|---|
| <b>Eye contact</b>  | Flush eyes with plenty of water.  |
| <b>Skin contact</b> | Wash off with soap and plenty of water.   |
| <b>Ingestion</b>    | Never give anything by mouth to an unconscious person. Rinse mouth with water.                |
| <b>Inhalation</b>   | Move person into fresh air. If not breathing give artificial respiration consult a physician. |

#### SECTION 5: FIRE-FIGHTING MEASURES

|                                 |  |
|---------------------------------|--|
| <b>Flash point</b>              | Not available  |
| <b>Ignition temperature</b>     | Not available  |
| <b>Extinguishing media</b>      | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. |
| <b>Fire fighting procedures</b> | Wear self contained breathing apparatus for fire fighting if necessary   |

#### SECTION 6: ACCIDENTAL RELEASE MEASURES

|                                  |  |
|----------------------------------|--|
| <b>Personal precautions</b>      | Avoid breathing vapors mist or gas.              |
| <b>Environmental precautions</b> | Prevent product from entering drains.            |
| <b>Methods for cleaning</b>      | Keep in suitable, closed containers for disposal |

#### SECTION 7: HANDLING AND STORAGE

|                 |  |
|-----------------|--|
| <b>Handling</b> | Wear personal protective equipment and avoid contact with skin and eyes. Good laboratory technique should be used in handling product. |
| <b>Storage</b>  | Keep container tightly closed in a dry and well-ventilated place.  |

#### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

|                                 |  |
|---------------------------------|--|
| <b>Engineering measures</b>     | Contains no substances with occupational exposure limit values   |
| <b>Respiratory protection</b>   | Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). |
| <b>Eye protection</b>           | Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).  |
| <b>Skin and body protection</b> | Wear appropriate protective gloves and clothes to prevent skin exposure.   |
| <b>Hygiene measures</b>         | Handle in accordance with good industrial hygiene and safety practices.  |

#### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

|   |                                      |
|---|--------------------------------------|
| <b>Physical state</b>                         | Clear liquid                         |
| <b>Odor</b>                                   | Not available                        |
| <b>pH</b>                                     | 7.2 – 9.2 (1:10 dilution @ 20 – 25°) |
| <b>Melting/freezing point</b>                 | Not available                        |
| <b>Boiling point</b>                          | Not available                        |
| <b>Flash point</b>                            | Not available                        |
| <b>Freezing point</b>                         | Not available                        |
| <b>Evaporation rate</b>                       | Not available                        |
| <b>Flammability</b>                           | Not available                        |
| <b>Upper/lower flammability limits</b>        | Not available                        |
| <b>Vapor pressure</b>                         | Not available                        |
| <b>Vapor density</b>                          | Not available                        |
| <b>Specific gravity</b>                       | Not available                        |
| <b>Water solubility</b>                       | Soluble                              |
| <b>Partition coefficient: n-octanol/water</b> | Not available                        |
| <b>Decomposition temperature</b>              | Not available                        |
| <b>Viscosity</b>                              | Not available                        |

#### SECTION 10: STABILITY AND REACTIVITY

|                                 |   |
|---------------------------------|---|
| <b>Stability</b>                | Stable under recommended storage conditions   |
| <b>Materials to avoid</b>       | Bases and oxidizers   |
| <b>Conditions to avoid</b>      | Excessive heat  |
| <b>Hazardous polymerization</b> | Will not occur  |
| <b>Hazardous decomposition</b>  | Hazardous decomposition products formed under fire conditions include hydrogen chloride gas and oxides of carbon and nitrogen (NO <sub>x</sub> ). |

#### SECTION 11: TOXICOLOGICAL INFORMATION

|                                 |               |
|---------------------------------|---------------|
| <b>Acute toxicity</b>           | Not available |
| <b>Irritation and corrosion</b> | Not available |
| <b>Sensitization</b>            | Not available |
| <b>Chronic exposure</b>         | Not available |

## Carcinogenic effects

|              |  |
|--------------|--|
| <b>IARC</b>  | No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. |
| <b>ACGIH</b> | No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.            |
| <b>NTP</b>   | No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.                 |
| <b>OSHA</b>  | No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.             |

**Mutagenic effects** Not available

**Reproductive toxicity** Not available

## SECTION 12: ECOLOGICAL INFORMATION

**Toxicity** Not available

**Persistence/degradability** Not available

**Bioaccumulative potential** Not available

**Mobility in soil** Not available

**Other adverse effects** Not available

## SECTION 13: DISPOSAL CONSIDERATIONS

**Product** Observe all federal, state, and local environmental regulations

**Contaminated packaging** Dispose of as unused product.

## SECTION 14: TRANSPORT INFORMATION

**DOT** Not regulated hazardous material

**IATA** Not regulated hazardous material

**IMDG** Not regulated hazardous material

## SECTION 15: REGULATORY INFORMATION

**OSHA Hazards** Irritant

**TSCA Status** All components are listed on the TSCA inventory

**SARA 302 Components** No components of this material are subject to the reporting requirements of SARA Title III, Section 302.

|                             |   |
|-----------------------------|---|
| <b>SARA 311/312 Hazards</b> | No components of this material are subject to the reporting requirements of SARA Title III, Section 311/312.  |
| <b>SARA 313 Components</b>  | This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313. |
| <b>California Prop 65</b>   | This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.                                      |
| <b>DSL Status</b>           | All components of this product are on the Canadian DSL list.  |
| <b>WHMIS Classification</b> | D2B (toxic materials causing other toxic effects)<br>Moderate skin irritant<br>Moderate respiratory irritant<br>Moderate eye irritant   |

## SECTION 16: OTHER INFORMATION

Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof, Charles River Endosafe makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its safety and suitability for their purposes prior to use. In no event will Charles River Endosafe be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information.

No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or of any other nature, are made hereunder with respect to information or the product to which the information refers.

**Prepared by:** Charles River Laboratories  
Phone: (843) 402 4900  
[www.criver.com](http://www.criver.com)