Material Safety Data Sheet
Tris Buffer Solution 1.0M - 0.3M

MSDS# 89945

Section 1 - Chemical Product and Company Identification

MSDS Name: Tris Buffer Solution 1.0M - 0.3M
Catalog Numbers: BP1761-1, BP1761-500

Synonyms:

Company Identification:
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call:
201-796-7100
Emergency Number US:
201-796-7100
CHEMTREC Phone Number, US:
800-424-9300

Section 2 - Composition, Information on Ingredients

Risk Phrases:

CAS#: 60-00-4
Chemical Name: Ethylenediaminetetraacetic acid (EDTA)
%
N/A
EINECS#: 200-449-4

Hazard Symbols:

Risk Phrases:

CAS#: 77-86-1
Chemical Name: Tris(hydroxymethyl)aminomethane
%
3.6
EINECS#: 201-064-4

Hazard Symbols:

Risk Phrases:

CAS#: 7732-18-5
Chemical Name: Water
%
Balance
EINECS#: 231-791-2

Hazard Symbols:

Text for R-phrases: see Section 16

Potential Health Effects

Eye: May cause eye irritation.

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Caution! May cause eye, skin, and respiratory tract irritation. Target Organs: Kidneys, bone marrow.

Potential Health Effects

Eye: May cause eye irritation.
Skin: May cause irritation with burning pain, itching and redness.
Ingestion: May cause irritation of the digestive tract.
Inhalation: May cause respiratory tract irritation.
Chronic: Prolonged or repeated skin contact may cause defatting and dermatitis.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
Skin: Get medical aid if irritation develops or persists. Flush skin with plenty of soap and water.
Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.
Inhalation: Remove from exposure and move to fresh air immediately. Get medical aid if cough or other symptoms appear.

Notes to Physician:

Section 5 - Fire Fighting Measures

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

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.

Autoignition Temperature: Not available
Flash Point: Not available
Explosion Limits: Not available
Lower:
Explosion Limits: Not available
Upper:
NFPA Rating: health: 1; flammability: 0; instability: 0;

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use with adequate ventilation. Avoid contact with skin and eyes. Keep container tightly closed. Avoid ingestion and inhalation.
Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Keep containers tightly closed.

Section 8 - Exposure Controls, Personal Protection

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylenediaminetetraacetic acid (EDTA)</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>Tris(hydroxymethyl)aminomethane</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>Water</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs: Ethylenediaminetetraacetic acid (EDTA): None listed Tris(hydroxymethyl)aminomethane: None listed Water: None listed

Engineering Controls:

Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Personal Protective Equipment

Eyes: 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.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a
Respirators: NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if
irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Color: clear, colorless
Odor: Not available
pH: 10.1-11.1 (@25C)
Vapor Pressure: Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Boiling Point: Not available
Freezing/Melting Point: Not available
Decomposition Temperature: Not available
Solubility in water: Not available
Specific Gravity/Density:
Molecular Formula:
Molecular Weight:

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. Decarboxylates above 150C.
Conditions to Avoid: Incompatible materials.
Incompatibilities with Other Materials Not available
Hazardous Decomposition Products Carbon monoxide, carbon dioxide, nitrogen oxides (NOx) and ammonia (NH3).
Hazardous Polymerization Has not been reported.

Section 11 - Toxicological Information

RTECS#:
CAS# 60-00-4: AH4025000
CAS# 77-86-1: TY2900000
CAS# 7732-18-5: ZC0110000
RTECS:
CAS# 60-00-4: Oral, mouse: LD50 = 30 mg/kg;

RTECS:
CAS# 77-86-1: Oral, rat: LD50 = 5900 mg/kg;

RTECS:
CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg;

Ethylenediaminetetraacetic acid (EDTA) - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA
Prop 65.
Tris(hydroxymethyl)aminomethane - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Water - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: Not regulated as a hazardous material
Hazard Class:
UN Number:
Packing Group:
Canada TDG
Shipping Name: Not available
Hazard Class:
UN Number:
Packing Group:

USA RQ: CAS# 60-00-4: 5000 lb final RQ; 2270 kg final RQ
Section 15 - Regulatory Information

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols: Not available
Risk Phrases:
Safety Phrases:

WGK (Water Danger/Protection)
 CAS# 60-00-4: 2
 CAS# 77-86-1: 1
 CAS# 7732-18-5: Not available

Canada
CAS# 60-00-4 is listed on Canada's DSL List
CAS# 77-86-1 is listed on Canada's DSL List
CAS# 7732-18-5 is listed on Canada's DSL List
Canadian WHMIS Classifications: Not controlled.
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.
CAS# 60-00-4 is not listed on Canada's Ingredient Disclosure List.
CAS# 77-86-1 is not listed on Canada's Ingredient Disclosure List.
CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

US Federal
TSCA
CAS# 60-00-4 is listed on the TSCA Inventory.
CAS# 77-86-1 is listed on the TSCA Inventory.
CAS# 7732-18-5 is listed on the TSCA Inventory.

Section 16 - Other Information
MSDS Creation Date: 3/19/1998
Revision #6 Date 7/20/2009

Reviewed 2014.04.29
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The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the
company has been advised of the possibility of such damages.

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