Material Safety Data Sheet
Buffer Solution pH 7.4

MSDS# 41135

Section 1 - Chemical Product and Company Identification

MSDS Name: Buffer Solution pH 7.4
Catalog Numbers: SB110-1, SB110-500
Synonyms: None

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:

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>%</th>
<th>EINECS#</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-02-8</td>
<td>Tetrasodium EDTA</td>
<td>&lt;1.0</td>
<td>200-573-9</td>
</tr>
<tr>
<td>7732-18-5</td>
<td>Water</td>
<td>99.0</td>
<td>231-791-2</td>
</tr>
<tr>
<td>7758-11-4</td>
<td>Dipotassium phosphate</td>
<td>&lt;1</td>
<td>231-834-5</td>
</tr>
<tr>
<td>7778-77-0</td>
<td>Potassium phosphate monobasic</td>
<td>&lt;1.0</td>
<td>231-913-4</td>
</tr>
</tbody>
</table>

Hazard Symbols:
Text for R-phrases: see Section 16

Hazard Symbols:  None listed
Risk Phrases:  None listed

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Caution! This is expected to be a low hazard for usual industrial handling. May cause eye, skin, and respiratory tract irritation. Target Organs: None.

Potential Health Effects

Eye:  May cause mild eye irritation.
Skin:  May cause skin irritation. Low hazard for usual industrial handling.
Ingestion:  Low hazard for usual industrial handling. May cause gastric disturbances and electrolytic imbalance.
Inhalation:  May cause respiratory tract irritation. Low hazard for usual industrial handling.
Chronic:  No information found.

Section 4 - First Aid Measures

Eyes:  Get medical aid. Gently lift eyelids and flush continuously with water.
Skin:  Get medical aid if irritation develops or persists. Flush skin with plenty of soap and water.
Ingestion:  Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.
Inhalation:  Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. 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:  Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

| Autoignition | Temperature: | Not applicable. | Not applicable. |
| Explosion Limits: | Lower: | Not available | 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:  Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container.

Section 7 - Handling and Storage

Handling:  Use with adequate ventilation. Avoid contact with eyes. Keep container tightly closed.
Storage:  Store in a cool, dry place.

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>Tetrasodium EDTA</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>
<tr>
<td>Dipotassium phospha</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>Potassium phosphate</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>
OSHA Vacated PELs: Tetrasodium EDTA: None listed Water: None listed Dipotassium phosphate: None listed Potassium phosphate monobasic: None listed

Engineering Controls:
Good general ventilation should be sufficient to control airborne levels.

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 gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to minimize contact with skin.

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.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Color: Not available
Odor: None reported
pH: 7.4 @ 25°C
Vapor Pressure: Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Boiling Point: 100 deg C (212.00°F)
Freezing/Melting Point: 0 deg C (32.00°F)

Section 10 - Stability and Reactivity

Chemical Stability: Stable.
Conditions to Avoid: None reported.
Incompatibilities with Other Materials: Not available
Hazardous Decomposition Products: None.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

CAS# 64-02-8: AH5075000
RTECS#: CAS# 7732-18-5: ZC0110000
CAS# 7758-11-4: None listed
CAS# 7778-77-0: TC6615500
RTECS: CAS# 64-02-8: Draize test, rabbit, eye: 1900 ug;
Draize test, rabbit, eye: 100 mg/24H Moderate;
Draize test, rabbit, skin: 500 mg/24H Moderate;

LD50/LC50: CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg;

RTECS: CAS# 7758-11-4:
RTECS:

CAS# 7778-77-0: Skin, rabbit: LD50 = >4640 mg/kg.

Carcinogenicity:
- Tetrasodium EDTA - 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.
- Dipotassium phosphate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
- Potassium phosphate monobasic - 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

Other: No information 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
- Hazard Class:
- UN Number:
- Packing Group:
- Canada TDG
- Shipping Name: Not available
- Hazard Class:
- UN Number:
- Packing Group:

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives
- Hazard Symbols: Not available
- Risk Phrases:
- Safety Phrases:
  - S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)
- CAS# 64-02-8: 2
- CAS# 7732-18-5: Not available
- CAS# 7758-11-4: 1
- CAS# 7778-77-0: 1

Canada
- CAS# 64-02-8 is listed on Canada's DSL List
- CAS# 7732-18-5 is listed on Canada's DSL List
- CAS# 7758-11-4 is listed on Canada's DSL List
- CAS# 7778-77-0 is listed on Canada's DSL List
- Canadian WHMIS Classifications: Not available

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# 64-02-8 is not listed on Canada's Ingredient Disclosure List.
- CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.
- CAS# 7758-11-4 is not listed on Canada's Ingredient Disclosure List.
- CAS# 7778-77-0 is not listed on Canada's Ingredient Disclosure List.

US Federal
TSCA

CAS# 64-02-8 is listed on the TSCA Inventory.
CAS# 7732-18-5 is listed on the TSCA Inventory.
CAS# 7758-11-4 is listed on the TSCA Inventory.
CAS# 7778-77-0 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 10/21/1997
Revision #6 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantibility 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.

--------------------------------------------------------------------------------------------------