1. Product and Company Identification

<table>
<thead>
<tr>
<th>Product identifier</th>
<th>YSI 2787 Ethanol Buffer Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version #</td>
<td>01</td>
</tr>
<tr>
<td>Issue date</td>
<td>11-July-2014</td>
</tr>
<tr>
<td>Revision date</td>
<td>-</td>
</tr>
<tr>
<td>Supersedes date</td>
<td>-</td>
</tr>
<tr>
<td>Product code</td>
<td>2787</td>
</tr>
<tr>
<td>Product use</td>
<td>Analysis Standard/Reagent</td>
</tr>
</tbody>
</table>

Manufacturer information

YSI, Inc
1700/1725 Brannum Lane
Yellow Springs, Ohio 45387
MSDSInfo@ysi.com
(937) 767-7241
CHEMTREC (US/Canada) (800) 424-9300
CHEMTREC (International) 011 703-527-3887
(Collect calls accepted)

Supplier
Not available.

2. Hazards Identification

Emergency overview
WARNING
Causes serious eye irritation. Exposure to powder or dusts may be irritating to eyes, nose and throat. Possible reproductive hazard.

Potential health effects

Routes of exposure
Inhalation. Ingestion. Skin contact. Eye contact.

Eyes
Causes eye irritation. Avoid contact with eyes.

Skin
Dust or powder may irritate the skin. Avoid contact with the skin.

Inhalation
Dust may irritate respiratory system. Do not breathe dust.

Ingestion
Do not ingest.

Chronic effects
May cause adverse reproductive effects - such as birth defects, miscarriages, or infertility based on animal data.

Signs and symptoms
May cause eye irritation. Dust may irritate skin and the respiratory system.

Potential environmental effects
Ecological injuries are not known or expected under normal use.

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium phosphate dibasic</td>
<td>7558-79-4</td>
<td>60 - 65</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>7647-14-5</td>
<td>16 - 22</td>
</tr>
<tr>
<td>Potassium EDTA</td>
<td>25102-12-9</td>
<td>&lt; 10</td>
</tr>
<tr>
<td>Sodium Benzoate</td>
<td>532-32-1</td>
<td>&lt; 10</td>
</tr>
<tr>
<td>Sodium acid phosphate</td>
<td>7558-80-7</td>
<td>3 - 4</td>
</tr>
<tr>
<td>Gentamicin sulfate (salt)</td>
<td>1405-41-0</td>
<td>0.5 - 1.5</td>
</tr>
</tbody>
</table>

4. First Aid Measures

First aid procedures

Eye contact
Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Skin contact
Wash off with soap and water. Get medical attention if irritation develops and persists.
Inhalation
If dust from the material is inhaled, remove the affected person immediately to fresh air. Call a physician if symptoms develop or persist.

Ingestion
Rinse mouth. Get medical attention if symptoms occur.

General advice
If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire Fighting Measures

Flammable properties
Not flammable by WHMIS criteria.

Extinguishing media
Suitable extinguishing media
Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

Protection of firefighters
Specific hazards arising from the chemical
During fire, gases hazardous to health may be formed.

Protective equipment for firefighters
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions
Use water spray to cool unopened containers.

Specific methods
Use standard firefighting procedures and consider the hazards of other involved materials.

Explosion data
Sensitivity to static discharge
Not available.

Sensitivity to mechanical impact
Not available.

Hazardous combustion products
Phosphorus oxides.

6. Accidental Release Measures

Personal precautions
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of dust from the spilled material. Wear a dust mask if dust is generated above exposure limits. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. For personal protection, see section 8 of the MSDS.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not contaminate water.

Methods for containment
Stop leak if you can do so without risk. If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Prevent entry into waterways, sewer, basements or confined areas.

Methods for cleaning up
Minimize dust generation and accumulation. Should not be released into the environment. This product is miscible in water. Collect dust using a vacuum cleaner equipped with HEPA filter. Avoid the generation of dusts during clean-up. Following product recovery, flush area with water. Clean up in accordance with all applicable regulations. For waste disposal, see section 13 of the MSDS.

Other information
Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Provide appropriate exhaust ventilation at places where dust is formed. Minimize dust generation and accumulation. Avoid breathing dust. Avoid contact with eyes. Should be handled in closed systems, if possible. Pregnant or breastfeeding women must not handle this product. Observe good industrial hygiene practices.

Storage
Store locked up. Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the MSDS).

8. Exposure Controls / Personal Protection

Occupational exposure limits
No exposure limits noted for ingredient(s).

Engineering controls
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
9. Physical & Chemical Properties

Appearance
- Physical state: Solid.
- Form: Powder.
- Color: White.
- Odor: Mild odor.
- Odor threshold: Not available.
- pH: 6.5 - 7.5
- Vapor pressure: Not applicable.
- Vapor density: Not applicable.
- Boiling point: Not available.
- Melting point/Freezing point: > 500 °F (> 260 °C)
- Solubility (water): Soluble.
- Specific gravity: > 1
- Flash point: Not applicable.
- Flammability limits in air, upper, % by volume: Not available.
- Flammability limits in air, lower, % by volume: Not available.
- Auto-ignition temperature: Not available.
- Evaporation rate: Not available.
- Partition coefficient (n-octanol/water): Not available.

10. Chemical Stability & Reactivity Information

Chemical stability: Material is stable under normal conditions.

Conditions to avoid: Contact with incompatible materials. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).

Incompatible materials: Strong oxidizing agents.

Hazardous decomposition products: Phosphorus oxides.

Possibility of hazardous reactions: Not available.

11. Toxicological Information

Toxicological data

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium acid phosphate (CAS 7558-80-7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rabbit</td>
<td>&gt; 7940 mg/kg</td>
</tr>
<tr>
<td><strong>Oral</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Mouse</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>8290 mg/kg</td>
</tr>
</tbody>
</table>
### Components

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium chloride (CAS 7647-14-5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td>Oral</td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>3000 mg/kg</td>
</tr>
<tr>
<td>Sodium phosphate dibasic (CAS 7558-79-4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute</td>
<td>Oral</td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>17 g/kg</td>
</tr>
</tbody>
</table>

**Acute effects**
- Sensitization: Not classified.
- Local effects: Irritating to eyes.
- Chronic effects: May cause adverse reproductive effects - such as birth defects, miscarriages, or infertility.
- Carcinogenicity: This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
- Skin corrosion/irritation: Not classified.
- Serious eye damage/irritation: Causes serious eye irritation.
- Mutagenicity: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
- Reproductive effects: Suspected of damaging fertility or the unborn child.
- Teratogenicity: Not available.
- Symptoms and target organs: Symptoms include itching, burning, redness, and tearing of eyes. May cause adverse reproductive effects - such as birth defects, miscarriages, or infertility based on animal data.
- Synergistic materials: Not available.

### 12. Ecological Information

#### Ecotoxicological data

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium acid phosphate (CAS 7558-80-7)</td>
<td>Aquatic</td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Western mosquitofish (Gambusia affinis)</td>
</tr>
<tr>
<td>Sodium Benzoate (CAS 532-32-1)</td>
<td>Aquatic</td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Fathead minnow (Pimephales promelas)</td>
</tr>
<tr>
<td>Sodium chloride (CAS 7647-14-5)</td>
<td>Aquatic</td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Daphnia magna)</td>
</tr>
</tbody>
</table>

**Ecotoxicity**
- Not expected to be harmful to aquatic organisms.

**Environmental effects**
- An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

**Aquatic toxicity**
- The product is not expected to be hazardous to the environment.

**Persistence and degradability**
- No data is available on the degradability of this product.

### 13. Disposal Considerations

#### Disposal instructions
- Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.

#### Waste from residues / unused products
- Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

#### Contaminated packaging
- Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.
14. Transport Information

**TDG**
Not regulated as dangerous goods.

**IATA**
Not regulated as dangerous goods.

**IMDG**
Not regulated as dangerous goods.

15. Regulatory Information

**Canadian regulations**
This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

**WHMIS status**
Controlled

**WHMIS classification**
D2B - Other Toxic Effects-TOXIC

**WHMIS labeling**

**International Inventories**

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other Information

**Disclaimer**
YSI, Inc cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user’s responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use.

**Prepared by**
Not available.