1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Phosphate buffered saline

Product Number : P5493
Brand : Sigma

Supplier : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO  63103
USA
Telephone : +1 800-325-5832
Fax : +1 800-325-5052
Emergency Phone # (For both supplier and manufacturer) : (314) 776-6555

Preparation Information : Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
No known OSHA hazards

Not a dangerous substance or mixture according to the Globally Harmonised System (GHS).

HMIS Classification
- Health hazard: 1
- Flammability: 0
- Physical hazards: 0

NFPA Rating
- Health hazard: 1
- Fire: 0
- Reactivity Hazard: 0

Potential Health Effects
- Inhalation : May be harmful if inhaled. May cause respiratory tract irritation.
- Skin : May be harmful if absorbed through skin. May cause skin irritation.
- Eyes : May cause eye irritation.
- Ingestion : May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : PBS

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disodium hydrogenorthophosphate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>7558-79-4</td>
<td>1 - 5 %</td>
</tr>
<tr>
<td>EC-No.</td>
<td>231-448-7</td>
<td></td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES
If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact
Wash off with soap and plenty of water.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water.

5. FIREFIGHTING MEASURES

   Conditions of flammability
   Not flammable or combustible.

   Suitable extinguishing media
   Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

   Special protective equipment for firefighters
   Wear self contained breathing apparatus for fire fighting if necessary.

   Hazardous combustion products
   Hazardous decomposition products formed under fire conditions. - Oxides of phosphorus, Hydrogen chloride gas, Sodium oxides

6. ACCIDENTAL RELEASE MEASURES

   Personal precautions
   Avoid breathing vapours, mist or gas.

   Environmental precautions
   Do not let product enter drains.

   Methods and materials for containment and cleaning up
   Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

   Conditions for safe storage
   Keep container tightly closed in a dry and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

   Contains no substances with occupational exposure limit values.

   Personal protective equipment

   Respiratory protection
   Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

   Hand protection
   Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

   Eye protection
   Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

   Skin and body protection
   impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

   Hygiene measures
General industrial hygiene practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
- Form: liquid
- Colour: no data available

Safety data
- pH: no data available
- Melting point/freezing point: no data available
- Boiling point: no data available
- Flash point: no data available
- Ignition temperature: no data available
- Auto-ignition temperature: no data available
- Lower explosion limit: no data available
- Upper explosion limit: no data available
- Vapour pressure: no data available
- Density: no data available
- Water solubility: no data available
- Partition coefficient: n-octanol/water: no data available
- Relative vapour density: no data available
- Odour: no data available
- Odour Threshold: no data available
- Evaporation rate: no data available

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
no data available

Conditions to avoid
no data available

Materials to avoid
no data available

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Oxides of phosphorus, Hydrogen chloride gas, Sodium oxides
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity
- Oral LD50: no data available
- Inhalation LC50: no data available
no data available

**Dermal LD50**
no data available

**Other information on acute toxicity**
no data available

**Skin corrosion/irritation**
no data available

**Serious eye damage/eye irritation**
Eyes: no data available

**Respiratory or skin sensitisation**
no data available

**Germ cell mutagenicity**
no data available

**Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity**
no data available

**Teratogenicity**
no data available

**Specific target organ toxicity - single exposure (Globally Harmonized System)**
no data available

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**
no data available

**Aspiration hazard**
no data available

**Potential health effects**

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**Signs and Symptoms of Exposure**
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Synergistic effects**
no data available

**Additional Information**
RTECS: Not available

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12. ECOLOGICAL INFORMATION
Toxicity
no data available

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

Product
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

15. REGULATORY INFORMATION

OSHA Hazards
No known OSHA hazards

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: 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.

SARA 311/312 Hazards
No SARA Hazards

Massachusetts Right To Know Components

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Pennsylvania Right To Know Components

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New Jersey Right To Know Components

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California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Further information
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