

## SAFETY DATA SHEET

Creation Date 21-February-2014

Revision Date 02-April-2025

Revision Number 6

### 1. Identification

**Product Name** Sodium Phosphate Dibasic Heptahydrate (USP)

**Cat No. :** S471-3; S471-3LC; S471-300LB; NC1365991

**CAS-No** 7782-85-6

**Synonyms** Disodium hydrogen phosphate heptahydrate

**Recommended Use** Laboratory chemicals.

**Uses advised against** Food, drug, pesticide or biocidal product use.

#### Details of the supplier of the safety data sheet

##### Company

##### **Importer/Distributor**

Fisher Scientific  
112 Colonnade Road,  
Ottawa, ON K2E 7L6,  
Canada  
Tel: 1-800-234-7437

##### **Manufacturer**

Fisher Scientific Company  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

##### **Emergency Telephone Number**

CHEMTREC®, Inside the USA: 800-424-9300  
CHEMTREC®, Outside the USA: 001-703-527-3887

### 2. Hazard(s) identification

#### Classification

**WHMIS 2015 Classification** Not classified under the Hazardous Products Regulations (SOR/2015-17)

Based on available data, the classification criteria are not met

#### Label Elements

None required

### 3. Composition/Information on Ingredients

| Component                             | CAS-No    | Weight % |
|---------------------------------------|-----------|----------|
| Sodium phosphate dibasic heptahydrate | 7782-85-6 | 98-100   |
| Phosphoric acid, disodium salt        | 7558-79-4 | -        |

#### 4. First-aid measures

|                                                               |                                                                                                                         |
|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>Eye Contact</b>                                            | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.         |
| <b>Skin Contact</b>                                           | Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur. |
| <b>Inhalation</b>                                             | Remove to fresh air. Get medical attention immediately if symptoms occur.                                               |
| <b>Ingestion</b>                                              | Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.                   |
| <b>Most important symptoms/effects<br/>Notes to Physician</b> | None reasonably foreseeable.<br>Treat symptomatically                                                                   |

#### 5. Fire-fighting measures

|                                         |                          |
|-----------------------------------------|--------------------------|
| <b>Unsuitable Extinguishing Media</b>   | No information available |
| <b>Flash Point</b>                      | No information available |
| <b>Method -</b>                         | No information available |
| <b>Autoignition Temperature</b>         | No information available |
| <b>Explosion Limits</b>                 |                          |
| <b>Upper</b>                            | No data available        |
| <b>Lower</b>                            | No data available        |
| <b>Sensitivity to Mechanical Impact</b> | No information available |
| <b>Sensitivity to Static Discharge</b>  | No information available |

#### Specific Hazards Arising from the Chemical

Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

#### Hazardous Combustion Products

Oxides of phosphorus. Sodium oxides.

#### Protective Equipment and Precautions for Firefighters

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

#### NFPA

**Health**  
0

**Flammability**  
0

**Instability**  
1

**Physical hazards**  
N/A

#### 6. Accidental release measures

|                                  |                                                                                                    |
|----------------------------------|----------------------------------------------------------------------------------------------------|
| <b>Personal Precautions</b>      | Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation.  |
| <b>Environmental Precautions</b> | Should not be released into the environment. See Section 12 for additional Ecological Information. |

**Methods for Containment and Clean Up** Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

#### 7. Handling and storage

|                 |                                                                                                                                                                                   |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Handling</b> | Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation. Avoid dust formation. |
| <b>Storage.</b> | Keep containers tightly closed in a dry, cool and well-ventilated place. Incompatible                                                                                             |

Materials. Strong oxidizing agents. Strong acids. Metals.

## 8. Exposure controls / personal protection

**Exposure Guidelines** This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Engineering Measures** None under normal use conditions.

### Personal protective equipment

**Eye Protection** 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.

**Hand Protection** Protective gloves

| Glove material | Breakthrough time | Glove thickness | Glove comments         |
|----------------|-------------------|-----------------|------------------------|
| Natural rubber | See manufacturers | -               | Splash protection only |
| Nitrile rubber | recommendations   |                 |                        |
| Neoprene       |                   |                 |                        |
| PVC            |                   |                 |                        |

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

### Respiratory Protection

No protective equipment is needed under normal use conditions.

**Recommended Filter type:** Particle filter

### Environmental exposure controls

No information available.

### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

## 9. Physical and chemical properties

|                                         |                                 |
|-----------------------------------------|---------------------------------|
| <b>Physical State</b>                   | Solid                           |
| <b>Appearance</b>                       | White                           |
| <b>Odor</b>                             | Odorless                        |
| <b>Odor Threshold</b>                   | No information available        |
| <b>pH</b>                               | 9.0-9.3 (@ 20 ) 5% aq.sol. 20°C |
| <b>Melting Point/Range</b>              | 48 °C / 118.4 °F                |
| <b>Boiling Point/Range</b>              | No information available        |
| <b>Flash Point</b>                      | No information available        |
| <b>Evaporation Rate</b>                 | Not applicable                  |
| <b>Flammability (solid,gas)</b>         | No information available        |
| <b>Flammability or explosive limits</b> |                                 |
| Upper                                   | No data available               |
| Lower                                   | No data available               |
| <b>Vapor Pressure</b>                   | No information available        |

|                                        |                                                         |
|----------------------------------------|---------------------------------------------------------|
| Vapor Density                          | Not applicable                                          |
| Specific Gravity                       | No information available                                |
| Solubility                             | 154 g/L (20°C)                                          |
| Partition coefficient; n-octanol/water | No data available                                       |
| Autoignition Temperature               | No information available                                |
| Decomposition Temperature              | > 48°C                                                  |
| Viscosity                              | Not applicable                                          |
| Molecular Formula                      | H Na <sub>2</sub> O <sub>4</sub> P . 7 H <sub>2</sub> O |
| Molecular Weight                       | 268.07                                                  |

## 10. Stability and reactivity

|                                  |                                                           |
|----------------------------------|-----------------------------------------------------------|
| Reactive Hazard                  | None known, based on information available                |
| Stability                        | Stable under normal conditions.                           |
| Conditions to Avoid              | Incompatible products. Excess heat. Avoid dust formation. |
| Incompatible Materials           | Strong oxidizing agents, Strong acids, Metals             |
| Hazardous Decomposition Products | Oxides of phosphorus, Sodium oxides                       |
| Hazardous Polymerization         | Hazardous polymerization does not occur.                  |
| Hazardous Reactions              | None under normal processing.                             |

## 11. Toxicological information

### Acute Toxicity

#### Product Information

**Oral LD50** Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

**Dermal LD50** Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

**Mist LC50** Based on ATE data, the classification criteria are not met. ATE > 5 mg/l.

#### Component Information

| Component                      | LD50 Oral              | LD50 Dermal | LC50 Inhalation |
|--------------------------------|------------------------|-------------|-----------------|
| Phosphoric acid, disodium salt | LD50 = 17 g/kg ( Rat ) | Not listed  | Not listed      |

**Toxicologically Synergistic Products** No information available

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

|                 |                                                                                          |
|-----------------|------------------------------------------------------------------------------------------|
| Irritation      | No information available                                                                 |
| Sensitization   | No information available                                                                 |
| Carcinogenicity | The table below indicates whether each agency has listed any ingredient as a carcinogen. |

| Component                             | CAS-No    | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|---------------------------------------|-----------|------------|------------|------------|------------|------------|
| Sodium phosphate dibasic heptahydrate | 7782-85-6 | Not listed | Not listed | Not listed | Not listed | Not listed |
| Phosphoric acid, disodium salt        | 7558-79-4 | Not listed | Not listed | Not listed | Not listed | Not listed |

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

|                                                   |                                                                |
|---------------------------------------------------|----------------------------------------------------------------|
| <b>STOT - single exposure</b>                     | None known                                                     |
| <b>STOT - repeated exposure</b>                   | None known                                                     |
| <b>Aspiration hazard</b>                          | No information available                                       |
| <b>Symptoms / effects, both acute and delayed</b> | No information available                                       |
| <b>Endocrine Disruptor Information</b>            | No information available                                       |
| <b>Other Adverse Effects</b>                      | The toxicological properties have not been fully investigated. |

## 12. Ecological information

### Ecotoxicity

Do not empty into drains.

|                                      |                                                                          |
|--------------------------------------|--------------------------------------------------------------------------|
| <b>Persistence and Degradability</b> | Soluble in water Persistence is unlikely based on information available. |
| <b>Bioaccumulation/ Accumulation</b> | No information available.                                                |
| <b>Mobility</b>                      | Will likely be mobile in the environment due to its water solubility.    |

## 13. Disposal considerations

|                               |                                                                                                                                                                                                                                                                 |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Waste Disposal Methods</b> | Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification. |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 14. Transport information

|                 |               |
|-----------------|---------------|
| <b>DOT</b>      | Not regulated |
| <b>TDG</b>      | Not regulated |
| <b>IATA</b>     | Not regulated |
| <b>IMDG/IMO</b> | Not regulated |

## 15. Regulatory information

### International Inventories

| Component                             | CAS-No    | DSL | NDSL | TSCA | TSCA Inventory notification - Active-Inactive | EINECS    | ELINCS | NLP |
|---------------------------------------|-----------|-----|------|------|-----------------------------------------------|-----------|--------|-----|
| Sodium phosphate dibasic heptahydrate | 7782-85-6 | -   | -    | -    | -                                             | -         | -      | -   |
| Phosphoric acid, disodium salt        | 7558-79-4 | X   | -    | X    | ACTIVE                                        | 231-448-7 | -      | -   |

| Component                             | CAS-No    | IECSC | KECL     | ENCS | ISHL | TCSI | AICS | NZIoC | PICCS |
|---------------------------------------|-----------|-------|----------|------|------|------|------|-------|-------|
| Sodium phosphate dibasic heptahydrate | 7782-85-6 | X     | -        | X    | -    | X    | X    | X     | X     |
| Phosphoric acid, disodium salt        | 7558-79-4 | X     | KE-12344 | X    | X    | X    | X    | X     | X     |

### Legend:

X - Listed '-' - Not Listed

**KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**Canada**

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and meets the requirements of the HPR (Paragraph 13(1)(a) of the Hazardous Products Act (HPA)).

**Other International Regulations**

**Authorisation/Restrictions according to EU REACH** Not applicable

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

| Component                             | CAS-No    | OECD HPV       | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|---------------------------------------|-----------|----------------|------------------------------|---------------------------|--------------------------------------------|
| Sodium phosphate dibasic heptahydrate | 7782-85-6 | Not applicable | Not applicable               | Not applicable            | Not applicable                             |
| Phosphoric acid, disodium salt        | 7558-79-4 | Listed         | Not applicable               | Not applicable            | Not applicable                             |

| Component                             | CAS-No    | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|---------------------------------------|-----------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|----------------------------|------------------------------------|
| Sodium phosphate dibasic heptahydrate | 7782-85-6 | Not applicable                                                                            | Not applicable                                                                           | Not applicable             | Not applicable                     |
| Phosphoric acid, disodium salt        | 7558-79-4 | Not applicable                                                                            | Not applicable                                                                           | Not applicable             | Not applicable                     |

**16. Other information**

**Prepared By** Regulatory Affairs  
Thermo Fisher Scientific  
Email: EMSDS.RA@thermofisher.com

**Creation Date** 21-February-2014

**Revision Date** 02-April-2025

**Print Date** 02-April-2025

**Revision Summary** This document has been updated to comply with the requirements of WHMIS 2015 to align with the Globally Harmonised System (GHS) for the Classification and Labelling of Chemicals.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**