

DISODIUM HYDROGEN PHOSPHATE HEPTAHYDRATE

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1. Product Identification

Synonym(s): Disodium phosphate heptahydrate; Phosphoric acid, disodium salt, heptahydrate; Disodium hydrogen phosphate, 7-hydrate

CAS No.: 7782-85-6

Molecular Weight: 268.07

Chemical Formula: $\text{Na}_2\text{HPO}_4 \cdot 7\text{H}_2\text{O}$

Product Codes: CHEM-088 and others.

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Sodium Phosphate, Dibasic, Heptahydrate	7782-85-6	98 - 100%	Yes

3. Hazards Identification

Emergency Overview

CAUTION! MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. MAY BE HARMFUL IF SWALLOWED OR INHALED.

SAF-T-DATA^(tm) Ratings

Health Rating: 2 - Moderate (Life)

Flammability Rating: 0 - None

Reactivity Rating: 1 - Slight

Contact Rating: 2 - Moderate

Lab Protective Equip: GOGGLES; LAB COAT

Storage Color Code: Green (General Storage)

Potential Health Effects

Eyes:

Dust or powder may irritate eye tissue.

Skin:

Dust or powder may irritate the skin.

Inhalation:

Inhalation of dusts may cause respiratory irritation.

Ingestion:

Expected to be a low ingestion hazard. May cause irritation of the gastrointestinal tract. Will have a laxative effect if swallowed.

Chronic effects:

None known.

4. First Aid Measures

Eye contact:

Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if irritation develops and persists.

Skin contact:

Immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops and persists.

Inhalation:

Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.

Ingestion:

Give one or two glasses of water if patient is alert and able to swallow. Seek immediate medical attention. Do not induce vomiting.

Notes to physician:

Treat symptomatically.

General advice:

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

Fire:

Not considered to be a fire hazard.

Explosion:

Not considered to be an explosion hazard.

Fire Extinguishing Media:

Use any means suitable for extinguishing surrounding fire.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal. Small amounts of residue may be flushed to sewer with plenty of water. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

None established.

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear protective gloves and clean body-covering clothing.

Eye Protection:

Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance:

White granular or crystalline solid.

Odor:

None.

Odor threshold:

Not available.

pH:

9.5

Melting point:

118.4°F (48.1°C)

Boiling point:

Not applicable.

Flash point:

Not available.

Evaporation rate:

Not available.

Flammability limits in air, upper, % by volume:

Not available.

Flammability limits in air, lower, % by volume:

Not available.

Vapor pressure:

Not available.

Vapor density:

Not available.

Specific gravity:

Not available.

Relative density:

Not available.

Solubility (water):

Soluble.

Partition coefficient (n-octanol/water):

Not available

Auto-ignition temperature:

Not available.

Decomposition temperature:

Not available.

10. Stability and Reactivity

Chemical stability:

Stable under normal temperature conditions. The substance is hygroscopic and will absorb water by contact with the moisture in the air.

Conditions to avoid:

Incompatible materials.

Incompatible materials:

Acids.

Hazardous decomposition products:

Decomposition of this product may yield oxides of phosphorus. Sodium oxides.

Possibility of hazardous reactions:

Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological Data:

SODIUM PHOSPHATE DIBASIC HEPTAHYDRATE (7782-85-6) Acute Oral LD50 Rat: 12930 mg/kg

Sensitization:

Not a skin sensitizer.

Acute effects:

Low hazard for usual industrial or commercial handling.

Local effects:

May cause eye irritation. May cause skin irritation. May cause irritation to the respiratory system. Will have a laxative effect if swallowed.

Carcinogenicity:

This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Skin corrosion/irritation:

Contact with skin may cause irritation.

Epidemiology:

No epidemiological data is available for this product.

Mutagenicity:

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Neurological effects:

None known.

Reproductive effects:

Contains no ingredient listed as toxic to reproduction

Teratogenicity:

No data available to indicate product or any components present at greater than 0.1% may cause birth defects.

12. Ecological Information

Environmental Fate:

No information found.

Environmental Toxicity:

No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Not regulated.

15. Regulatory Information

US federal regulations:

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. This product is not listed on the U.S. EPA TSCA Inventory. Under TSCA, hydrates are considered mixtures of their anhydrous salt and water. Accordingly, the anhydrous form is subject to TSCA reporting requirements.

CERCLA/SARA Hazardous Substances:

Not applicable.

CERCLA (Superfund) reportable quantity:

None

Superfund Amendments and Reauthorization Act of 1986 (SARA) Hazard categories:

Immediate Hazard - Yes

Delayed Hazard - No

Fire Hazard - No

Pressure Hazard - No

Reactivity Hazard - No

Section 311 hazardous chemical - Yes

16. Other Information

NFPA Ratings: Health: 1 Flammability: 0 Reactivity: 0

Label Hazard Warning:

CAUTION: Product dust may be irritating to eyes, skin and respiratory system. Label Precautions Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Wash thoroughly after handling. Keep container closed.

Label Precautions:

Avoid contact with eyes, skin and clothing.

Wash thoroughly after handling.

Avoid breathing dust.

Keep container closed.

Use with adequate ventilation.

Label First Aid:

Immediately flush eyes with plenty of water for at least 15 minutes. Flush skin thoroughly with water. If gas/fume/vapor/dust/mist from the material is inhaled, remove the affected person immediately to fresh air. If ingestion of a large amount does occur, call a poison control center immediately.

Product Use:

Laboratory Reagent and Consumer Hobby.

Revision Information:

None

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