SECTION 1: Identification

1.1. Identification

Product form : Substance
Substance name : Sodium Phosphate Dibasic Dihydrate
CAS-No. : 10028-24-7
Formula : Na₂HPO₄ • 2H₂O

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Pharmaceuticals
Buffering Agent

1.3. Manufacturer

Jost Chemical Co.
8150 Lackland Rd.
Saint Louis, Missouri 63114
T 314-428-4300 - F 314-428-4366
sds@jostchemical.com - www.jostchemical.com

1.4. Emergency telephone number

Emergency number : For Hazardous Materials [or Dangerous Goods] Incident Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night
United States and Canada: 1-800-424-9300 / +1 703-527-3887
Global: +1 703-741-5970

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification
Not classified

2.2. GHS Label elements, including precautionary statements

GHS-US labeling
No labeling applicable

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : None to our knowledge.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type : Mono-constituent

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Phosphate Dibasic Dihydrate (Main constituent)</td>
<td>(CAS-No.) 10028-24-7</td>
<td>100</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

Full text of hazard classes and H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.
4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms:
- Non-toxic if swallowed (LD50 oral, rat > 5000 mg/kg). Non-toxic in contact with skin (LD50 skin > 5000 mg/kg). Slightly irritant to skin. Slightly harmful by inhalation. Slightly irritant to respiratory organs. Slightly irritant to eyes.
- Symptoms/effects: (see section(s) : Section 2.2.
  - Symptoms/effects after inhalation: Coughing.
  - Symptoms/effects after skin contact: Slight irritation.
  - Symptoms/effects after eye contact: Slight irritation.
  - Chronic symptoms: Red skin. Dry skin. Itching.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media


5.2. Specific hazards arising from the chemical

Fire hazard: Non combustible.
Explosion hazard: Not applicable.
Reactivity: Reacts violently with (some) acids.

5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighborhood close doors and windows.
Firefighting instructions: Dilute toxic gases with water spray.
Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Avoid dust formation. Avoid breathing dust, mist or spray.

6.1.1. For non-emergency personnel

Emergency procedures: Ventilate spillage area.
Measures in case of dust release: In case of dust production: keep upwind. Dust production: have neighborhood close doors and windows.

6.1.2. For emergency responders

Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment: Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray.
Methods for cleaning up: Mechanically recover the product.
Other information: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
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7.2. Conditions for safe storage, including any incompatibilities

<table>
<thead>
<tr>
<th>Technical measures</th>
<th>Does not require any specific or particular technical measures.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage conditions</td>
<td>Store in a clean, dry warehouse in the original unopened containers. Store in a well-ventilated place. Keep cool.</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>Strong oxidizing agents. Strong acids.</td>
</tr>
<tr>
<td>Heat-ignition</td>
<td>Heat sources.</td>
</tr>
<tr>
<td>Information on mixed storage</td>
<td>(strong) acids. water/moisture.</td>
</tr>
<tr>
<td>Storage area</td>
<td>Store in a dry area. Keep container in a well-ventilated place. Store at ambient temperature. Meet the legal requirements.</td>
</tr>
</tbody>
</table>

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls | Ensure good ventilation of the work station.
Environmental exposure controls | Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:


Materials for protective clothing:

Wear suitable protective clothing, gloves and eye/face protection

Hand protection:

Impermeable protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Protective clothing

Respiratory protection:

Dust production: dust mask with filter type P1

Personal protective equipment symbol(s):

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Solid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Granules.</td>
</tr>
<tr>
<td>Color</td>
<td>Colorless to white</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>9 (1 %)</td>
</tr>
<tr>
<td>Melting point</td>
<td>240 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
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Flash point: Not applicable
Relative evaporation rate (butyl acetate=1): No data available
Flammability (solid, gas): Non flammable.
Vapor pressure: < 0.1 hPa (20 °C)
Relative vapor density at 20 °C: Not applicable
Relative density: Not applicable
Molecular mass: 177.99 g/mol
Solubility: Soluble in water.
Water: 12 g/100ml
Log Pow: -5.8 (Published data)
Auto-ignition temperature: Not applicable
Decomposition temperature: 240 °C
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available
Explosion limits: Not applicable
Explosive properties: Not explosive.
Oxidizing properties: Non oxidizing material according to EC criteria.

9.2. Other information
Minimum ignition energy: Not applicable
SADT: Not applicable
VOC content: 0 %
Other properties: Hygroscopic. Substance has basic reaction.

SECTION 10: Stability and reactivity

10.1. Reactivity
Reacts violently with (some) acids.

10.2. Chemical stability
Hygroscopic.

10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid
None to our knowledge.

10.5. Incompatible materials
Strong acids. Strong oxidizing agents.

10.6. Hazardous decomposition products
On thermal decomposition (pyrolysis), releases: Phosphorus oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity (oral): Not classified (Lack of data)
Acute toxicity (dermal): Not classified
Acute toxicity (inhalation): Not classified

Sodium Phosphate Dibasic Dihydrate (10028-24-7)

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>17000 mg/kg (Rat)</td>
</tr>
<tr>
<td>LD50 dermal rat</td>
<td>&gt; 7940 mg/kg (Rat)</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>17000 mg/kg body weight</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Not classified (Lack of data)
pH: 9 (1 %)

Serious eye damage/irritation: Not classified (Lack of data)
pH: 9 (1 %)

Respiratory or skin sensitization: Not classified (Lack of data)

Germ cell mutagenicity: Not classified (Based on available data, the classification criteria are not met)
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| Carcinogenicity | Not classified (Lack of data) |
| Reproductive toxicity | Not classified (Based on available data, the classification criteria are not met) |
| Specific target organ toxicity – single exposure | Not classified (Lack of data) |
| Specific target organ toxicity – repeated exposure | Not classified (Lack of data) |
| Aspiration hazard | Not classified (Not applicable) |
| Viscosity, kinematic | No data available |
| Potential Adverse human health effects and symptoms | Non-toxic if swallowed (LD50 oral, rat > 5000 mg/kg). Non-toxic in contact with skin (LD50 skin > 5000 mg/kg). Slightly irritant to skin. Slightly harmful by inhalation. Slightly irritant to respiratory organs. Slightly irritant to eyes. |
| Symptoms/effects | (see section(s) : Section 2.2. |
| Symptoms/effects after inhalation | Coughing. |
| Symptoms/effects after skin contact | Slight irritation. |
| Symptoms/effects after eye contact | Slight irritation. |
| Chronic symptoms | Red skin. Dry skin. Itching. |

## SECTION 12: Ecological information

### 12.1. Toxicity

**Ecology - general**
- Presents no particular risk to the environment, provided the disposal requirements (see section 13) and national or local regulations are complied with.

**Ecology - air**
- Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).

**Ecology - water**

### Sodium Phosphate Dibasic Dihydrate (10028-24-7)

| LC50 fish 1 | > 2400 mg/l (OECD 203: Fish, Acute Toxicity Test, 48 h, Leuciscus idus) |
| EC50 Daphnia 1 | 126 mg/l (TLM; 72 h) |

### 12.2. Persistence and degradability

**Sodium Phosphate Dibasic Dihydrate (10028-24-7)**

| Persistence and degradability | Biodegradability: not applicable. |
| Biochemical oxygen demand (BOD) | Not applicable |
| Chemical oxygen demand (COD) | Not applicable |
| ThOD | Not applicable |
| BOD (% of ThOD) | Not applicable |

### 12.3. Bioaccumulative potential

**Sodium Phosphate Dibasic Dihydrate (10028-24-7)**

| Log Pow | -5.8 (Published data) |
| Bioaccumulative potential | Not bioaccumulative. |

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

**Waste treatment methods**
- Dispose of contents/container in accordance with licensed collector’s sorting instructions.

**Product/Packaging disposal recommendations**
- Do not discharge into surface water. Remove waste in accordance with local and/or national regulations. Remove to an authorized dump (Class I). Precipitate/make insoluble.
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SECTION 14: Transport information

Department of Transportation (DOT)
In accordance with DOT

Not regulated

Transportation of Dangerous Goods

Proper Shipping Name (Transportation of Dangerous Goods): Not regulated for transport

Transport by sea

Proper Shipping Name (IMDG): Not regulated for transport

Air transport

Proper Shipping Name (IATA): Not regulated for transport

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

| Sodium Phosphate Dibasic Dihydrate | CAS-No. 10028-24-7 | 100% |

15.2. International regulations

CANADA
No additional information available

EU-Regulations
No additional information available

National regulations

**Sodium Phosphate Dibasic Dihydrate (10028-24-7)**
- Listed on the AICS (Australian Inventory of Chemical Substances)
- Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
- Listed on INSDC (Mexican national Inventory of Chemical Substances)
- Listed on NZIoC (New Zealand Inventory of Chemicals)
- Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

The anhydrous form of this material is listed on the United States TSCA (Toxic Substance Control Act) inventory

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

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NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.

Hazard Rating
Health : 1 Slight Hazard - Irritation or minor reversible injury possible
Flammability : 0 Minimal Hazard - Materials that will not burn
Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

SDS US (HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.