SECTION 1: Identification

1.1. Identification
Product form: Substance
Substance name: Ammonium Phosphate Dibasic
CAS-No.: 7783-28-0
Formula: \((\text{NH}_4\text{)}_2\text{HPO}_4\)

1.2. Recommended use and restrictions on use
Use of the substance/mixture: Laboratory reagent or buffer

1.3. Supplier
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 under normal use.

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>Ammonium Phosphate Dibasic (Main constituent)</td>
<td>(CAS-No.) 7783-28-0</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. Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact: Rinse with water. Soap may be used. Take victim to a doctor if irritation persists. Wash skin with plenty of water.
Ammonium Phosphate Dibasic
Safety Data Sheet

First-aid measures after eye contact: Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Take victim to an ophthalmologist if irritation persists. Rinse eyes with water as a precaution.


4.2 Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms: Practically non-toxic if swallowed (LD50 oral, rat > 2000 mg/kg). Non-toxic in contact with skin (LD50 skin> 5000 mg/kg). Not irritant to skin. Practically non-toxic by inhalation (LC50 inh, rat > 5 mg/l/4h). Not irritant to eyes.

Symptoms/effects after inhalation: No effects known.
Symptoms/effects after skin contact: No effects known.
Symptoms/effects after eye contact: No effects known.
Symptoms/effects after ingestion: No effects known.

Chronic symptoms: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Skin rash/inflammation. Respiratory difficulties.

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: DIRECT FIRE HAZARD: Non combustible.
Explosion hazard: DIRECT EXPLOSION HAZARD: No direct explosion hazard.
Reactivity: The product is non-reactive under normal conditions of use, storage and transport.

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: Cool tanks/drum with water spray/remove them into safety. Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water.

SECTION 6: Accidental release measures

6.1 General precautions, protective equipment and emergency procedures


6.1.1 For non-emergency personnel

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. Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

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. Avoid raising dust. Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Clean contaminated clothing. Thoroughly clean/dry the installation before use.

Hygiene measures: Observe normal hygiene standards. Keep container tightly closed. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a clean, dry warehouse in the original unopened containers. Store in a well-ventilated place. Keep cool.

Heat-ignition: KEEP SUBSTANCE AWAY FROM: heat sources.

Information on mixed storage: KEEP SUBSTANCE AWAY FROM: water/moisture.

Storage area: Store at room temperature. Store in a dry area. Meet the legal requirements.

Special rules on packaging: SPECIAL REQUIREMENTS: closing, watertight, dry, correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

Packaging materials: SUITABLE MATERIAL: steel. paper. textile. synthetic material.

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:
Gloves

Eye protection:
Safety glasses. In case of dust production: protective goggles. 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**

<table>
<thead>
<tr>
<th>9.1.</th>
<th>Information on basic physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>White crystals, White granular crystals.</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>7.7 - 8.1 (5 %)</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not applicable (decomposes)</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Non flammable.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>0.00076 hPa (20 °C)</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.62 (20 °C)</td>
</tr>
<tr>
<td>Specific gravity / density</td>
<td>1619 kg/m³</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>132.1 g/mol</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water. Water: 588 g/l (20 °C)</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>155 °C</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

**9.2. Other information**

| VOC content | Not applicable (inorganic) |
| Other properties | Hygroscopic. Substance has basic reaction. |

**SECTION 10: Stability and reactivity**

<table>
<thead>
<tr>
<th>10.1.</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>The product is non-reactive under normal conditions of use, storage and transport.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10.2.</th>
<th>Chemical stability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hygroscopic.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10.3.</th>
<th>Possibility of hazardous reactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>No dangerous reactions known under normal conditions of use.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10.4.</th>
<th>Conditions to avoid</th>
</tr>
</thead>
<tbody>
<tr>
<td>None under recommended storage and handling conditions (see section 7).</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10.5.</th>
<th>Incompatible materials</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>10.6.</th>
<th>Hazardous decomposition products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decomposes on exposure to temperature rise: release of corrosive gases/vapors (ammonia, phosphorus oxides, nitrous vapors).</td>
<td></td>
</tr>
</tbody>
</table>

**SECTION 11: Toxicological information**

<table>
<thead>
<tr>
<th>11.1.</th>
<th>Information on toxicological effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (oral)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Acute toxicity (dermal)</td>
<td>Not classified</td>
</tr>
</tbody>
</table>
Ammonium Phosphate Dibasic
Safety Data Sheet

Acute toxicity (inhalation) : Not classified

Ammonium Phosphate Dibasic (7783-28-0)


LD50 dermal rat > 5000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male/female, Experimental value)

LC50 inhalation rat (mg/l) > 5 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male/female, Experimental value)

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity – single exposure : Not classified

Specific target organ toxicity – repeated exposure : Not classified

Aspiration hazard : Not classified

Viscosity, kinematic : No data available

Likely routes of exposure : Skin and eye contact. Inhalation. Ingestion.

Potential Adverse human health effects and symptoms : Practically non-toxic if swallowed (LD50 oral, rat > 2000 mg/kg). Non-toxic in contact with skin (LD50 skin> 5000 mg/kg). Not irritant to skin. Practically non-toxic by inhalation (LC50 inh, rat > 5 mg/l/4h). Not irritant to eyes.

Symptoms/effects after inhalation : No effects known.

Symptoms/effects after skin contact : No effects known.

Symptoms/effects after eye contact : No effects known.

Symptoms/effects after ingestion : No effects known.

Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Skin rash/inflammation. Respiratory difficulties.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.


Ammonium Phosphate Dibasic (7783-28-0)

LC50 fish 1 1700 - 1875 mg/l (APHA, 96 h, Cirrhinus mrigala, Static system, Fresh water, Experimental value)

ErC50 (algae) > 97.1 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value)

12.2. Persistence and degradability

Ammonium Phosphate Dibasic (7783-28-0)

Persistence and degradability : Readily biodegradable in water.

Biochemical oxygen demand (BOD) : Not applicable (inorganic)

Chemical oxygen demand (COD) : Not applicable (inorganic)

ThOD : Not applicable (inorganic)

12.3. Bioaccumulative potential

Ammonium Phosphate Dibasic (7783-28-0)

Bioaccumulative potential : Not bioaccumulative.
### Mobility in soil

<table>
<thead>
<tr>
<th><strong>Ammonium Phosphate Dibasic (7783-28-0)</strong></th>
<th>Ecology - soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>No (test) data on mobility of the substance available.</td>
<td></td>
</tr>
</tbody>
</table>

### Other adverse effects

No additional information available.

---

### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

- **Regional legislation (waste)**: LWCA (the Netherlands): KGA category 05.
- **Waste treatment methods**: Dispose of contents/container in accordance with licensed collector's sorting instructions.
- **Product/Packaging disposal recommendations**: Do not discharge into drains or the environment. Remove waste in accordance with local and/or national regulations. Remove to an authorized waste treatment plant.
- **Additional information**: Can be considered as non hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

### 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

- **Ammonium Phosphate Dibasic (7783-28-0)**
  - Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### 15.2. International regulations

- **CANADA**: No additional information available

- **EU-Regulations**: No additional information available

- **National regulations**: No additional information available

#### 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

Revision date: 06/07/2018

NFPA health hazard: 0 - Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.

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: 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

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.