SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form: Substance
Substance name: Ammonium Phosphate Dibasic
EC-No.: 231-987-8
CAS-No.: 7783-28-0
Formula: \((\text{NH}_4)_2\text{HPO}_4\)

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses
Use of the substance/mixture: Laboratory reagent or buffer

1.2.2. Uses advised against
No additional information available

1.3. Details of the supplier of the safety data sheet

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

Distributor: JOST CHEMICAL EUROPE SPRL
rue du Bois Portal n° 30/1-B
B-5300 Andenne - BELGIQUE
T +32 85-552655 - F +32 85-552654
info@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: Hazards identification

2.1. Classification of the substance or mixture

Not classified

Adverse physicochemical, human health and environmental effects
No additional information available

2.2. Label elements

Not considered hazardous.

2.3. Other hazards

Other hazards not contributing to the classification: None under normal use.
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

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>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium Phosphate Dibasic</td>
<td>(CAS-No.) 7783-28-0</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>(EC-No.) 231-987-8</td>
<td></td>
</tr>
</tbody>
</table>

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.

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.
First-aid measures after ingestion: Rinse mouth with water. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed
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. Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

SECTION 5: Firefighting measures
5.1. Extinguishing media

5.2. Special hazards arising from the substance or mixture
Fire hazard: DIRECT FIRE HAZARD: Non combustible.
Explosion hazard: DIRECT EXPLOSION HAZARD: No direct explosion hazard.
Hazardous decomposition products in case of fire: On burning: release of toxic and corrosive gases/vapours (phosphorus oxides, nitrous vapours).

5.3. Advice for firefighters
Precautionary measures fire: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions: Cool tanks/drums 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. 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
Measures in case of dust release: In case of dust production: keep upwind. Dust production: have neighbourhood 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 and ignition sources: 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.

7.3. Specific end use(s)

No additional information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Ammonium Phosphate Dibasic (7783-28-0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNEL/DMEL (Workers)</td>
</tr>
<tr>
<td>Long-term - systemic effects, dermal</td>
</tr>
<tr>
<td>Long-term - systemic effects, inhalation</td>
</tr>
<tr>
<td>DNEL/DMEL (General population)</td>
</tr>
<tr>
<td>Long-term - systemic effects, oral</td>
</tr>
<tr>
<td>Long-term - systemic effects, inhalation</td>
</tr>
<tr>
<td>Long-term - systemic effects, dermal</td>
</tr>
<tr>
<td>PNEC (Water)</td>
</tr>
<tr>
<td>PNEC aqua (freshwater)</td>
</tr>
<tr>
<td>PNEC aqua (marine water)</td>
</tr>
<tr>
<td>PNEC (STP)</td>
</tr>
<tr>
<td>PNEC sewage treatment plant</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls:
Ensure good ventilation of the work station.

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):

Environmental exposure controls:
Avoid release to the environment.
Ammonium Phosphate Dibasic
Safety Data Sheet
according to Regulation (EC) No. 453/2010

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</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>Molecular mass</td>
<td>132.1 g/mol</td>
</tr>
<tr>
<td>Colour</td>
<td>Colourless to white.</td>
</tr>
<tr>
<td>Odour</td>
<td>Odourless</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>7.7 - 8.1 (5 %)</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</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>Auto-ignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>155 °C</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Non flammable</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>0.00076 hPa (20 °C)</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.62 (20 °C)</td>
</tr>
<tr>
<td>Density</td>
<td>1619 kg/m³</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water.</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</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>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

9.2. Other information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOC content</td>
<td>Not applicable (inorganic)</td>
</tr>
<tr>
<td>Other properties</td>
<td>Hygroscopic. Substance has basic reaction.</td>
</tr>
</tbody>
</table>

SECTION 10: Stability and reactivity

10.1. Reactivity
The product is non-reactive under normal conditions of use, storage and transport.

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 under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

10.6. Hazardous decomposition products
Decomposes on exposure to temperature rise: release of corrosive gases/vapours (ammonia, phosphorus oxides, nitrous vapours).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Toxicity</th>
<th>Value</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>
<tr>
<td>Acute toxicity (inhalation)</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

**Ammonium Phosphate Dibasic (7783-28-0)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 2000 mg/kg bodyweight (OECD 425: Acute Oral Toxicity: Up-and-Down Procedure, Rat, Male/female, Experimental value)</td>
</tr>
<tr>
<td>LD50 dermal rat</td>
<td>&gt; 5000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male/female, Experimental value)</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>&gt; 5 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male/female, Experimental value)</td>
</tr>
</tbody>
</table>
Ammonium Phosphate Dibasic
Safety Data Sheet
according to Regulation (EC) No. 453/2010

Causes serious eye damage.
Serious eye damage/irritation
Respiratory or skin sensitisation
Germ cell mutagenicity
Reproductive toxicity
STOT-single exposure
STOT-repeated exposure
Aspiration hazard
Potential adverse human health effects and symptoms

Causes serious eye damage.
Serious eye damage/irritation
Respiratory or skin sensitisation
Germ cell mutagenicity
Reproductive toxicity
STOT-single exposure
STOT-repeated exposure
Aspiration hazard
Potential adverse human health effects and symptoms

PH: 7.7 - 8.1 (5 %)
PH: 7.7 - 8.1 (5 %)

Not classified
Not classified
Not classified
Not classified
Not classified
Not classified
Not classified
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.

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.
Dangerous for the environment: Not classified
Chronic aquatic toxicity: Not classified

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.

12.4. Mobility in soil
Ammonium Phosphate Dibasic (7783-28-0)
Ecology - soil No (test)data on mobility of the substance available.

12.5. Results of PBT and vPvB assessment
Ammonium Phosphate Dibasic (7783-28-0)
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment 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.
SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

| UN-No. (ADR) | Not applicable |
| UN-No. (IMDG) | Not applicable |
| UN-No. (IATA) | Not applicable |
| UN-No. (ADN) | Not applicable |
| UN-No. (RID) | Not applicable |

14.2. UN proper shipping name

| Proper Shipping Name (ADR) | Not regulated for transport |
| Proper Shipping Name (IMDG) | Not regulated for transport |
| Proper Shipping Name (IATA) | Not regulated for transport |
| Proper Shipping Name (ADN) | Not regulated for transport |
| Proper Shipping Name (RID) | Not regulated for transport |

14.3. Transport hazard class(es)

| ADR | Transport hazard class(es) (ADR) | Not applicable |
| IMDG | Transport hazard class(es) (IMDG) | Not applicable |
| IATA | Transport hazard class(es) (IATA) | Not applicable |
| ADN | Transport hazard class(es) (ADN) | Not applicable |
| RID | Transport hazard class(es) (RID) | Not applicable |

14.4. Packing group

| Packing group (ADR) | Not applicable |
| Packing group (IMDG) | Not applicable |
| Packing group (IATA) | Not applicable |
| Packing group (ADN) | Not applicable |
| Packing group (RID) | Not applicable |

14.5. Environmental hazards

| Dangerous for the environment | No |
| Marine pollutant | No |
| Other information | No supplementary information available |

14.6. Special precautions for user

| Overland transport | Transport regulations (ADR) | Not subject |
| Transport by sea | Transport regulations (IMDG) | Not subject |
| Air transport | Transport regulations (IATA) | Not subject |
| Inland waterway transport | Transport regulations (ADN) | Not subject |
| Rail transport | Transport regulations (RID) | Not subject |

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions
Ammonium Phosphate Dibasic is not on the REACH Candidate List
Ammonium Phosphate Dibasic
Safety Data Sheet
according to Regulation (EC) No. 453/2010

Ammonium Phosphate Dibasic is not on the REACH Annex XIV List

VOC content : Not applicable (inorganic)

Directive 2012/18/EU (SEVESO III)

15.1.2. National regulations
No additional information available

15.2. Chemical safety assessment
No additional information available

SECTION 16: Other information

Indication of changes:
This sheet was updated (refer to the date at the top of this page).

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.