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

1.1. Product identifier
Product form: Substance
Substance name: Calcium Phosphate Monobasic Anhydrous
Chemical name: Calcium Dihydrogen phosphate
CAS No: 7758-23-8
Product code: 2160
Formula: $\text{Ca(H}_2\text{PO}_4\text{)}_2$
Synonyms: acid calcium phosphate / AJAX (=calcium dihydrogen phosphate) / calcium bis(dihydrogenorthophosphate) / calcium bis(dihydrogenphosphate) / calcium bisphosphate / calcium diorthophosphate / calcium phosphate,monobasic / calcium superphosphate / calcium tetrahydrogen diorthophosphate / monocalcium orthophosphate / monocalciumphosphate / phosphoric acid, calcium salt / primary-calciumorthophosphate / prim-calciumphosphate
BIG no: 28479

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture: Food industry: additive
Fertilizer: raw material

1.3. Details of the supplier of the safety data sheet
Jost Chemical Co.
8150 Lackland Rd.
Saint Louis, Missouri 63114
T 314-428-4300 - F 314-428-4366
www.jostchemical.com

1.4. Emergency telephone number
Emergency number: CHEMTREC 800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification (GHS-US)
Eye Dam. 1 H318
Full text of H-phrases: see section 16

2.2. Label elements
GHS-US labeling
Hazard pictograms (GHS-US): 

GHS05

Signal word (GHS-US): Danger
Hazard statements (GHS-US): H318 - Causes serious eye damage
Precautionary statements (GHS-US): P280 - Wear eye protection
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a doctor

2.3. Other hazards
No additional information available

2.4. Unknown acute toxicity (GHS-US)
Not applicable
SECTION 3: Composition/information on ingredients

3.1. Substance

Substance type: Mono-constituent

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium Phosphate Monobasic Anhydrous</td>
<td>(CAS No) 7758-23-8</td>
<td>100</td>
<td>Eye Dam. 1, H318</td>
</tr>
</tbody>
</table>

Full text of H-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general:

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. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists. Wash skin with plenty of water.

First-aid measures after eye contact:
Rinse immediately with plenty of water for 15 minutes. Do not apply neutralizing agents. Take victim to an ophthalmologist. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

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. Ingestion of large quantities: immediately to hospital.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation:
AFTER INHALATION OF DUST: Slight irritation. EXPOSURE TO HIGH CONCENTRATIONS: Irritation of the respiratory tract. Irritation of the nasal mucous membranes.

Symptoms/injuries after skin contact:
Slight irritation.

Symptoms/injuries after eye contact:
Irritation of the eye tissue. Inflammation/damage of the eye tissue. Serious damage to eyes.

Symptoms/injuries after ingestion:

Chronic symptoms:
No effects known.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media


Unsuitable extinguishing media: No unsuitable extinguishing media known.

5.2. Special hazards arising from the substance or mixture

Fire hazard: DIRECT FIRE HAZARD. Non combustible. INDIRECT FIRE HAZARD. Reactions involving a fire hazard: see "Reactivity Hazard".

Explosion hazard: DIRECT EXPLOSION HAZARD. No data available on direct explosion hazard. INDIRECT EXPLOSION HAZARD. No data available on indirect explosion hazard.

Reactivity:
Decomposes on exposure to temperature rise: release of toxic/corrosive/combustible gases/vapours (phosphine). On burning: release of toxic and corrosive gases/vapours (phosphorus oxides). Reacts violently with (strong) oxidizers: (increased) risk of fire/explosion. Reacts violently with (some) acids/bases.

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. Do not move the load if exposed to heat. Dilute toxic gases with water spray.

Protection during firefighting:
Heat/fire exposure: compressed air/oxygen apparatus. 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

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**.

Emergency procedures: Avoid contact with skin and eyes. Do not breathe dust.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment: Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray. On heating: dilute combustible/toxic gases/vapours. Take account of toxic/corrosive precipitation water.

Methods for cleaning up: Recover mechanically the product. Prevent dust cloud formation. Scoop solid spill into closing containers. See "Material-handling" for suitable container materials. 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 8 : Exposure-controls/personal protection"**.

**SECTION 7: Handling and storage**

7.1. Precautions for safe handling

Precautions for safe handling: Ensure good ventilation of the work station. Comply with the legal requirements. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Avoid raising dust. Keep away from naked flames/heat. Observe normal hygiene standards. Keep container tightly closed. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Avoid contact with skin and eyes. Wear personal protective equipment.

Hygiene measures: 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

Technical measures: Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.


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

Prohibitions on mixed storage: KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) acids. (strong) bases. water/moisture.

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

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

Packaging materials: SUITABLE MATERIAL: polyethylene. MATERIAL TO AVOID: aluminium.

7.3. Specific end use(s)

No additional information available

**SECTION 8: Exposure controls/personal protection**

8.1. Control parameters

| Calcium Phosphate Monobasic Anhydrous (7758-23-8) | DNEL | DNEL | 4.07 mg/m³ (Long-term - systemic effects, inhalation, workers) |

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Calcium Phosphate Monobasic Anhydrous
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| Calcium Phosphate Monobasic Anhydrous (7758-23-8) | PNEC | PNEC | 50 mg/l (Sewage treatment plant) |
| Calcium Phosphate Monobasic Anhydrous (7758-23-8) | ACGIH | Not applicable |
| OSHA | OSHA PEL (TWA) (mg/m³) | 15 mg/m³ Total Dust 5 mg/m³ Respirable Dust |
| DNEL | DNEL | 4.07 mg/m³ (Long-term - systemic effects, inhalation, workers) |
| PNEC | PNEC | 50 mg/l (Sewage treatment plant) |

8.2. Exposure controls
Appropriate engineering controls: Ensure good ventilation of the work station. Extraction to remove dust at its source. Eye fountain.

Materials for protective clothing: GIVE EXCELLENT RESISTANCE: No data available. GIVE GOOD RESISTANCE: rubber. GIVE LESS RESISTANCE: No data available. GIVE POOR RESISTANCE: No data available.
Hand protection: Gloves.
Skin and body protection: Protective clothing.
Respiratory protection: Dust production: dust mask with filter type P1.

Environmental exposure controls: Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
Physical state: Solid
Color: White
Odor: Odourless
Odor threshold: No data available
pH: 3 (1 %)
pH solution: 1 %
Melting point: No data available
Freezing point: Not applicable
Boiling point: Not applicable
Flash point: Not applicable
Relative evaporation rate (butyl acetate=1): No data available
Flammability (solid, gas): No data available
Explosion limits: Not applicable
Explosive properties: No data available
Oxidizing properties: No data available
Vapor pressure: No data available
Relative density: Not applicable
Relative vapor density at 20 °C: No data available
Molecular mass: 234.06 g/mol
Water: 1.8 g/100ml
Log Pow: No data available
Log Kow: No data available
Calcium Phosphate Monobasic Anhydrous
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Auto-ignition temperature : Not applicable
Decomposition temperature : 203 °C
Viscosity : No data available
Viscosity, kinematic : Not applicable
Viscosity, dynamic : No data available

9.2. Other information
VOC content : Not applicable
Other properties : Hygroscopic. Substance has acid reaction.

SECTION 10: Stability and reactivity
10.1. Reactivity
Decomposes on exposure to temperature rise: release of toxic/corrosive/combustible gases/vapours (phosphine). On burning: release of toxic and corrosive gases/vapours (phosphorus oxides). Reacts violently with (strong) oxidizers: (increased) risk of fire/explosion. Reacts violently with (some) acids/bases.

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
Direct sunlight. Moisture.

10.5. Incompatible materials
No additional information available

10.6. Hazardous decomposition products
On heating/burning: release of toxic and corrosive gases/vapors phosphorus oxides.

SECTION 11: Toxicological information
11.1. Information on toxicological effects
Acute toxicity : Not classified
(Based on available data, the classification criteria are not met)

<table>
<thead>
<tr>
<th>Calcium Phosphate Monobasic Anhydrous (7758-23-8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
</tr>
<tr>
<td>ATE US (oral)</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation : Not classified
(Based on available data, the classification criteria are not met)
pH: 3 (1 %)

Serious eye damage/irritation : Causes serious eye damage.
(Based on available data, the classification criteria are not met)
pH: 3 (1 %)

Respiratory or skin sensitization : Not classified
(Based on available data, the classification criteria are not met)

Germ cell mutagenicity : Not classified
(Based on available data, the classification criteria are not met)

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
(Based on available data, the classification criteria are not met)
Aspiration hazard: Not classified
(Based on available data, the classification criteria are not met)

Symptoms/injuries after inhalation:
AFTER INHALATION OF DUST: Slight irritation. EXPOSURE TO HIGH CONCENTRATIONS: Irritation of the respiratory tract. Irritation of the nasal mucous membranes.

Symptoms/injuries after skin contact: Slight irritation.

Symptoms/injuries after eye contact:
Irritation of the eye tissue. Inflammation/damage of the eye tissue. Serious damage to eyes.

Symptoms/injuries after ingestion:

Chronic symptoms: No effects known.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.


Ecology - water:
For Flanders: maximum concentration in drinking water: 270 mg/l (calcium)(M.B. 28/1/2003).
May cause eutrophication. pH shift. Insufficient data available on ecotoxicity.

Calcium Phosphate Monobasic Anhydrous (7758-23-8)

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>&gt; 100 mg/l (96 hr; Onchorhyncus mykiss) (OECD 203 method) (results obtained by read-across)</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>&gt; 100 mg/l (48 hr; Daphnia magna) (OECD 202 method) (results obtained by read-across)</td>
</tr>
<tr>
<td>ErC50 (algae)</td>
<td>&gt; 87.6 mg/l (72 hr; Pseudokurchnerella subcapitata) (OECD 201) (results obtained by read-across)</td>
</tr>
<tr>
<td>NOEC (acute)</td>
<td>&gt; 100 mg/l (96 hr; Onchorhyncus mykiss) (OECD 203 method) (results obtained by read-across)</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

Calcium Phosphate Monobasic Anhydrous (7758-23-8)

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
<td>Biodegradability: not applicable.</td>
</tr>
<tr>
<td>Biochemical oxygen demand (BOD)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>ThOD</td>
<td>Not applicable</td>
</tr>
<tr>
<td>BOD (% of ThOD)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

Calcium Phosphate Monobasic Anhydrous (7758-23-8)

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
<td>No bioaccumulation data available.</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming: No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods: Dispose in a safe manner in accordance with local/national regulations.

Waste disposal recommendations: Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle/reuse. Precipitate/make insoluble. Remove to an authorized dump. Treat using the best available techniques before discharge into drains or the aquatic environment. Do not discharge into surface water.
Calcium Phosphate Monobasic Anhydrous
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SECTION 14: Transport information

Department of Transportation (DOT)
In accordance with DOT
Not regulated for transport

Additional information

Transport by sea
No additional information available

Air transport
No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Calcium Phosphate Monobasic Anhydrous (7758-23-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Calcium Phosphate Monobasic Anhydrous (7758-23-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA
Calcium Phosphate Monobasic Anhydrous (7758-23-8)
Listed on the Canadian DSL (Domestic Substances List) inventory.

Calcium Phosphate Monobasic Anhydrous (7758-23-8)
Listed on the Canadian DSL (Domestic Substances List) inventory.

EU-Regulations
Calcium Phosphate Monobasic Anhydrous (7758-23-8)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) substances.

Calcium Phosphate Monobasic Anhydrous (7758-23-8)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances) substances.

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Eye Dam. 1  
H318
Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]
Xi; R41
Full text of R-phrases: see section 16

National regulations
Calcium Phosphate Monobasic Anhydrous (7758-23-8)
Listed on the AICS (the Australian Inventory of Chemical Substances)
Listed on Inventory of Existing Chemical Substances (IECSC)
Listed on the Japanese ENCS (Existing & New Chemicals Substances) inventory.
Listed on the Korean ECL (Existing Chemical List) inventory.
Listed on INSQ (Mexican national Inventory of Chemical Substances)
Listed on New Zealand - Inventory of Chemicals (NZIoC)
Listed on Inventory of Chemicals and Chemical Substances (PICCS)
Calcium Phosphate Monobasic Anhydrous
Safety Data Sheet

15.3. US State regulations

SECTION 16: Other information

Indication of changes : Initial SDS.

Full text of H-phrases:

<table>
<thead>
<tr>
<th>Eye Dam. 1</th>
<th>Serious eye damage/eye irritation Category 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
</tbody>
</table>

NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.

HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur
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.

Personal Protection : E - Safety glasses, Gloves, Dust respirator

SDS US Custom (-ADR)

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.