Safety Data Sheet

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name: Granular Triple Super Phosphate

Synonyms:
- Calcium Biphosphate; Calcium bis(dihydrogenorthophosphate); Calcium Dihydrogen Orthophosphate; Calcium Superphosphate; Monocalcium Phosphate, Anhydrous

CAS Number: 7758-23-8

SDS Number/Grade: 17

EC Number: 231-837-1

REACH Registration Number: 01-2119490065-39-0016

Molecular Formula: H6O8P2Ca1

Molecular Weight: 234

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

Relevant identified use(s): Agriculture Chemical

1.3 Details of the supplier of the safety data sheet

Manufacturer: Innophos
259 Prospect Plains Rd. Bldg A
Cranbury, NJ 08512-3706
United States

Telephone (Technical): 609-495-2495

1.4 Emergency telephone number

Manufacturer: 800-424-9300 - Chemtrec - within USA and Canada

Manufacturer: +1 703-527-3887 - Chemtrec - outside USA and Canada (collect calls accepted)

Manufacturer: 615-386-7816 - Innophos Emergency Communication Team (ECT)

Section 2: Hazards Identification

EU/EEC

According to EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture

CLP:
- Serious Eye Damage 1 - H318

DSD/DPD:
- Irritant (Xi) - R41

2.2 Label Elements

CLP
2.3 Other Hazards

**CLP**
- According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

**DSD/DPD**
- This product is considered dangerous according to the European Directive 67/548/EEC.

### United States (US)

According to OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

**OSHA HCS 2012**
- Serious Eye Damage 1 - H318

2.2 Label elements

**OSHA HCS 2012**

**DANGER**

**Hazard statements**
- Causes serious eye damage - H318

**Precautionary statements**

**Prevention**
- Wear protective gloves/protective clothing/eye protection/face protection. - P280

**Response**
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. - P305+P351+P338
  - P310 - Immediately call a POISON CENTER or doctor/physician.

2.3 Other hazards

**OSHA HCS 2012**

### Canada

According to WHMIS
2.1 Classification of the substance or mixture

WHMIS

- Corrosive - E

2.2 Label elements

WHMIS

- Corrosive - E

2.3 Other hazards

WHMIS

- In Canada, the product mentioned above is considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

---

Section 3 - Composition/Information on Ingredients

3.1 Substances

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Identifiers</th>
<th>%</th>
<th>LD50/LC50</th>
<th>Classifications According to Regulation/Directive</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid, calcium salt (2:1)</td>
<td>CAS:7758-23-8</td>
<td>100%</td>
<td>Ingestion/Oral-Rat LD50 • 3986 mg/kg</td>
<td>EU DSD/DPD: Self Classified: Xi R41</td>
<td>NDA</td>
</tr>
<tr>
<td></td>
<td>EC Number:231-837-1</td>
<td></td>
<td>Skin-Rabbit LD50 • &gt;2 g/kg</td>
<td>EU CLP: Self Classified: Eye Irrit. 1, H318</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>OSHA HCS 2012: Eye Irrit. 1</td>
<td></td>
</tr>
</tbody>
</table>

3.2 Mixtures

- Material does not meet the criteria of a mixture in accordance with Regulation (EC) No 1272/2008.

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Section 4 - First Aid Measures

4.1 Description of first aid measures

**Inhalation**

- If signs/symptoms develop, move person to fresh air. If signs/symptoms continue, get medical attention.

**Skin**

- IF ON SKIN: Wash with plenty of soap and water. If irritation develops and persists, get medical attention. Take off contaminated clothing and wash before reuse.

**Eye**

- In case of contact with substance, immediately flush eyes with running water for at least 15 minutes. Seek immediate medical attention.

**Ingestion**

- Do not induce vomiting unless instructed to do so by a physician. If victim is conscious and alert, give 2-3 glasses of water to drink. Seek immediate medical attention. Do not leave victim unattended. To prevent aspiration of swallowed product, lay victim on side with head lower than waist. Vomiting may occur spontaneously. If vomiting occurs and the victim is conscious, give water to further dilute the chemical.

4.2 Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed
Notes to Physician

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

4.4 Other information

- Call 911 or emergency medical service. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media
- Not combustible. Use extinguishing media suitable for surrounding fire.

Unsuitable Extinguishing Media
- None known.

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards
- Non-combustible.

Hazardous Combustion Products
- None known.

5.3 Advice for firefighters

- Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters’ protective clothing will only provide limited protection. Keep unauthorized personnel away.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions
- Do not touch or walk through spilled material.

Emergency Procedures
- Keep unauthorized personnel away. Wear appropriate protective gear.

6.2 Environmental precautions

- Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures
- Sweep or vacuum up and place in an appropriate closed container. Avoid generating dust. Clean up residual material by washing area with water and detergent. Collect washings for disposal. Do not return material to its original container.

6.4 Reference to other sections

- Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling
- This is a food ingredient intended for human consumption. Keep containers closed when not in use. Avoid breathing dust. Avoid direct or prolonged contact with skin and eyes.

7.2 Conditions for safe storage, including any incompatibilities

Storage
- Store in closed containers. Store in an area that is cool, dry, sanitary, well-ventilated, isolated from all toxic and harmful substances. This product is hygroscopic and tends to cake on storage.
7.3 Specific end use(s)

- Refer to Section 1.2 - Relevant identified uses.

## Section 8 - Exposure Controls/Personal Protection

### 8.1 Control parameters

### 8.2 Exposure controls

**Engineering Measures/Controls**
- Dilution ventilation. Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values.

**Personal Protective Equipment**

**Respiratory**
- For limited exposure use an N95 dust mask. For prolonged exposure use an air-purifying respirator with high efficiency particulate air (HEPA) filters. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

**Eye/Face**
- Wear eye protection.

**Hands**
- Wear appropriate gloves.

**Skin/Body**
- Wear long sleeves and/or protective coveralls.

**General Industrial Hygiene Considerations**
- Wash hands before eating.

**Environmental Exposure Controls**
- Follow best practice for site management and disposal of waste.

### Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

OSHA = Occupational Safety and Health Administration

PEL = Permissible Exposure Level determined by the Occupational Safety and Health Administration (OSHA)

STEL = Short Term Exposure Limits are based on 15-minute exposures

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

## Section 9 - Physical and Chemical Properties

### 9.1 Information on Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Material Description</th>
<th>Physical Form</th>
<th>Appearance/Description</th>
<th>Colorless, pearly scales or powder with no odor.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Solid</td>
<td></td>
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<tr>
<td>Color</td>
<td>Colorless</td>
<td>Odor</td>
<td>Odorless</td>
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<tr>
<td>Odor Threshold</td>
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<table>
<thead>
<tr>
<th>General Properties</th>
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<th>Melting Point</th>
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<tbody>
<tr>
<td>Boiling Point</td>
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<tr>
<td>Decomposition Temperature</td>
<td>Data lacking</td>
<td>pH</td>
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<tr>
<td>Specific Gravity/Relative Density</td>
<td>0.59 Water=1</td>
<td>Water Solubility</td>
<td>Moderately soluble</td>
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<td>Viscosity</td>
<td>Data lacking</td>
<td>Explosive Properties</td>
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<td>Oxidizing Properties:</td>
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<table>
<thead>
<tr>
<th>Volatility</th>
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<tr>
<td>Vapor Pressure</td>
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<td>Vapor Density</td>
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<td>Evaporation Rate</td>
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<tr>
<td>Flammability</td>
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Preparation Date: 13/August/2004
Revision Date: 07/October/2014

Format: EU CLP/REACH Language: English (US)

WHMIS, EU CLP, EU DSD/DPD, OSHA HCS 2012

Page 5 of 10
9.2 Other Information

- No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

- No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

- Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

- Hazardous polymerization will not occur.

10.4 Conditions to avoid


10.5 Incompatible materials

- None known.

10.6 Hazardous decomposition products

- None known.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

| CAS   | Acute Toxicity: Ingestion/Oral-Rat LD50 • 3986 mg/kg; Sense Organs and Special Senses: Eye: Ptosis; Behavioral: Somnolence (general depressed activity); Skin and Appendages: Other: Hair; Skin-Rabbit LD50 • >2 g/kg; Skin and Appendages: After systemic exposure: Dermatitis, other. | Irritation: Eye-Rabbit • Severe irritation • Comments: Washed; Skin-Rabbit • Essentially non-irritating • Comments: At 4 hours |

GHS Properties

<table>
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<th>Classification</th>
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<tr>
<td>Acute toxicity EU/CLP • Acute Toxicity - Classification criteria not met; Acute Toxicity - Dermal - Classification criteria not met; Acute Toxicity - Inhalation - Data lacking; Acute Toxicity - Oral - Classification criteria not met</td>
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<tr>
<td>OSHA HCS 2012 • Acute Toxicity - Data lacking; Acute Toxicity - Inhalation - Classification criteria not met; Acute Toxicity - Oral - Classification criteria not met</td>
</tr>
</tbody>
</table>

| Aspiration Hazard EU/CLP • Classification criteria not met |
| OSHA HCS 2012 • Classification criteria not met |

| Carcinogenicity EU/CLP • Classification criteria not met |
| OSHA HCS 2012 • Classification criteria not met |
Germ Cell Mutagenicity
EU/CLP • Classification criteria not met
OSHA HCS 2012 • Classification criteria not met

Skin corrosion/Irritation
EU/CLP • Inconclusive data
OSHA HCS 2012 • Classification criteria not met

Skin sensitization
EU/CLP • Data lacking
OSHA HCS 2012 • Data lacking

STOT-RE
EU/CLP • Data lacking
OSHA HCS 2012 • Data lacking

STOT-SE
EU/CLP • Data lacking
OSHA HCS 2012 • Data lacking

Toxicity for Reproduction
EU/CLP • Classification criteria not met
OSHA HCS 2012 • Classification criteria not met

Respiratory sensitization
EU/CLP • Data lacking
OSHA HCS 2012 • Data lacking

Serious eye damage/Irritation
EU/CLP • Serious Eye Damage 1
OSHA HCS 2012 • Serious Eye Damage 1

Route(s) of entry/exposure
- Inhalation, Skin, Eye, Ingestion

Medical Conditions
Aggravated by Exposure
- Disorders of the lungs. Skin/Dermal.

Potential Health Effects

Inhalation
- Acute (Immediate)
  Exposure to dust may cause irritation. Nuisance dust may affect the lungs but reactions are typically reversible.
- Chronic (Delayed)
  No data available

Skin
- Acute (Immediate)
  Exposure to dust may cause mechanical irritation.
- Chronic (Delayed)
  No data available.

Eye
- Acute (Immediate)
  Causes serious eye damage. Can cause corneal scratch, eye injury which may persist for several days.
- Chronic (Delayed)
  No data available.

Ingestion
- Acute (Immediate)
  Ingestion of large quantities may cause nausea, vomiting, diarrhea and abdominal cramps.
- Chronic (Delayed)
  No data available.

Carcinogenic Effects
- This product does not contain any ingredient designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.

Key to abbreviations
LD = Lethal Dose

Section 12 - Ecological Information

12.1 Toxicity
- No data found for product.

12.2 Persistence and degradability
12.3 Bioaccumulative potential
- No data found for product.

12.4 Mobility in Soil
- No data found for product.

12.5 Results of PBT and vPvB assessment
- PBT and vPvB assessment has not been carried out.

12.6 Other adverse effects
- No studies have been found.

### Section 13 - Disposal Considerations

#### 13.1 Waste treatment methods

**Product waste**
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

**Packaging waste**
- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

### Section 14 - Transport Information

<table>
<thead>
<tr>
<th></th>
<th>14.1 UN number</th>
<th>14.2 UN proper shipping name</th>
<th>14.3 Transport hazard class(es)</th>
<th>14.4 Packing group</th>
<th>14.5 Environmental hazards</th>
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<tbody>
<tr>
<td>DOT</td>
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<td>NDA</td>
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14.6 Special precautions for user
- None known.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
- Not relevant.

14.8 Other information
- The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

### Section 15 - Regulatory Information

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

**SARA Hazard Classifications**
- Acute

**Canada**

**Labor**

- Monocalcium Phosphate Anhydrous
  - WHMIS - Classifications of Substances
    - Monocalcium Phosphate Anhydrous
      - 7758-23-8
      - Not Listed
<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
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<td><strong>Canada - WHMIS</strong></td>
<td>Ingredient Disclosure List</td>
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<td><strong>Environment</strong></td>
<td>Canada - CEPA - Priority Substances List</td>
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<td><strong>Germany</strong></td>
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<td>Germany - TA Luft - Types and Classes</td>
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<td><strong>Singapore</strong></td>
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<td>Singapore - Corrosive and Explosive Substances - Corrosive Substances</td>
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<td><strong>United States</strong></td>
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U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs
• Monocalcium Phosphate Anhydrous 7758-23-8 Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs
• Monocalcium Phosphate Anhydrous 7758-23-8 Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting
• Monocalcium Phosphate Anhydrous 7758-23-8 Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing
• Monocalcium Phosphate Anhydrous 7758-23-8 Not Listed

United States - California

Environment
U.S. - California - Proposition 65 - Carcinogens List
• Monocalcium Phosphate Anhydrous 7758-23-8 Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity
• Monocalcium Phosphate Anhydrous 7758-23-8 Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)
• Monocalcium Phosphate Anhydrous 7758-23-8 Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)
• Monocalcium Phosphate Anhydrous 7758-23-8 Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female
• Monocalcium Phosphate Anhydrous 7758-23-8 Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male
• Monocalcium Phosphate Anhydrous 7758-23-8 Not Listed

15.2 Chemical Safety Assessment
• No Chemical Safety Assessment has been carried out.

15.3 Other Information
• FDA Status: This product meets the compositional requirements of: 21 CFR 182.1217 CALCIUM PHOSPHATE

Section 16 - Other Information

Last Revision Date 03/April/2014
Preparation Date 13/August/2004
Disclaimer/Statement of Liability
• The information herein is given in good faith but no warranty, expressed or implied, is made.

Key to abbreviations
NDA = No Data Available