



# Material Safety Data Sheet

## TRICALCIUM PHOSPHATE

Date Prepared: 8/28/07

Supersedes Date: 5/05/06

### 1. PRODUCT AND COMPANY DESCRIPTION

Innophos  
PO Box 8000  
259 Prospect Plains Road  
Cranbury NJ 08512-8000

#### Emergency Phone Numbers:

FOR EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT CONTACT: CHEMTREC (800-424-9300 within the United States or 703-527-3887 for international collect calls) or INNOPHOS ECT (Emergency Communication Team) at 615-386-7816.

#### For Product Information:

(609) 495-2495

#### Chemical Name or Synonym:

CALCIUM ORTHOPHOSPHATE; TRICALCIUM ORTHOPHOSPHATE

#### Molecular Formula:

$10 \text{ CaO }_3 \text{ P}_2\text{O}_5 \text{ H}_2\text{O}$  (approx)

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Reg Number	OSHA Hazard	Percentage
TRICALCIUM PHOSPHATE	1306-06-5	N	100
ALTERNATE CAS REGISTRY NUMBER	12167-74-7	N	

### 3. HAZARDS IDENTIFICATION

## A. EMERGENCY OVERVIEW:

### Physical Appearance and Odor:

white powder solid, odorless.

### Warning Statements:

Based on currently available data, this product does not meet the regulatory definition of a hazardous substance. However, good industrial hygiene practices should be used in handling it.

## B. POTENTIAL HEALTH EFFECTS:

### Acute Eye:

Dusts may cause irritation.

### Acute Skin:

Low acute dermal toxicity. Essentially non-irritating.

### Acute Inhalation:

Dusts may cause upper respiratory tract irritation.

### Acute Ingestion:

Low acute oral toxicity. Ingestion of large quantities may cause abdominal pain, abdominal cramps, nausea, vomiting, diarrhea.

### Chronic Effects:

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

## 4. FIRST AID MEASURES

### FIRST AID MEASURES FOR ACCIDENTAL:

#### Eye Exposure:

Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. Seek medical attention if irritation develops or persists or if visual changes occur.

#### Skin Exposure:

In case of contact, immediately wash with plenty of soap and water for at least 5 minutes. Seek medical attention if irritation develops or persists. Remove contaminated clothing and shoes. Clean contaminated clothing and shoes before re-use.

#### Inhalation:

If respiratory irritation or distress occurs remove victim to fresh air. Seek medical attention if respiratory irritation or distress continues.

**Ingestion:**

Do not induce vomiting unless instructed to do so by a physician. No harmful effects expected. If appreciable quantities are swallowed, call a physician or poison control center. Do not leave victim unattended.

**MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE:**

Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.

**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.

Treat symptomatically. No specific antidote available.

## 5. FIRE FIGHTING MEASURES

**FIRE HAZARD DATA:****Flash Point:**

Not Applicable

**Extinguishing Media:**

Not combustible. Use extinguishing method suitable for surrounding fire.

**Special Fire Fighting Procedures:**

Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.

**Unusual Fire and Explosion Hazards:**

Not combustible.

**Hazardous Decomposition Materials (Under Fire Conditions):**

none known

## 6. ACCIDENTAL RELEASE MEASURES

**Evacuation Procedures and Safety:**

Ventilate closed spaces before entering. Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

**Containment of Spill:**

Follow procedure described below under Cleanup and Disposal of Spill.

**Cleanup and Disposal of Spill:**

Scrape up and place in appropriate closed container (see Section 7: Handling and Storage). Clean up residual material by washing area with water. DO NOT RETURN MATERIAL TO ITS ORIGINAL CONTAINER. Collect washings for disposal. Decontaminate tools and equipment following cleanup. Avoid creation of dusty conditions.

**Environmental and Regulatory Reporting:**

Do not flush to drain. If spilled on the ground, the affected area should be scraped clean and placed in a appropriate container for disposal. Prevent material from entering public sewer system or any waterways.

**7. HANDLING AND STORAGE****Minimum/Maximum Storage Temperatures:**

Not Available

**Handling:**

Avoid contamination of storage containers. Avoid breathing dusts.

**Storage:**

Store in tightly closed containers. Store in an area that is isolated from all toxic and harmful substances, sanitary, dry, cool.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Introductory Remarks:**

These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and piping systems for maintenance and repairs. Waste resulting from these procedures should be handled in accordance with Section 13: Disposal Considerations.

Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

**Exposure Guidelines:**

Exposure limits represent regulated or recommended worker breathing zone concentrations measured by validated sampling and analytical methods, meeting the regulatory requirements. The following limits apply to this material, where, if indicated, S=skin and C=ceiling limit:

**PARTICULATES NOT OTHERWISE REGULATED RESPIRABLE FRACTION**

	Notes	TWA	STEL
OSHA		5 mg/cu m	

**PARTICULATES NOT OTHERWISE REGULATED TOTAL DUST**

	Notes	TWA	STEL
OSHA		15 mg/cu m	

**Engineering Controls:**

Where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures: general area dilution/exhaust ventilation.

**Respiratory Protection:**

When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations.

Under normal conditions, in the absence of other airborne contaminants, the following devices should provide protection from this material up to the conditions specified by the appropriate OSHA, WHMIS or ANSI standard(s): Air-purifying (half-mask/full-face) respirator with cartridges/canister approved for use against dusts, mists and fumes.

**Eye/Face Protection:**

Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.

It is generally regarded as good practice to wear a minimum of safety glasses with side shields when working in industrial environments.

**Skin Protection:**

Skin contact should be minimized through use of gloves and suitable long-sleeved clothing (i.e., shirts and pants). Consideration must be given both to durability as well as permeation resistance.

**Work Practice Controls:**

Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material:

- (1) Do not use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
- (2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
- (3) Wash exposed skin promptly to remove accidental splashes or contact with this material.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product Information phone number in Section 1 for its exact specifications.

**Physical Appearance:**

white powder solid.

**Odor:**

odorless.

**pH:**

Not Applicable

**Specific Gravity:**

Not Available

**Water Solubility:**

sparingly soluble

**Melting Point Range:**

1670 C (3038 F)

**Boiling Point Range:**

Not Available

**Vapor Pressure:**

Not Available

**Vapor Density:**

Not Available

**Molecular Weight:**

1004.6

## 10. STABILITY AND REACTIVITY

**Chemical Stability:**

This material is stable under normal handling and storage conditions described in Section 7.

**Conditions To Be Avoided:**

none known

**Materials/Chemicals To Be Avoided:**

none known

**The Following Hazardous Decomposition Products Might Be Expected:**

**Decomposition Type: thermal**

none known

**Hazardous Polymerization Will Not Occur.**

**Avoid The Following To Inhibit Hazardous Polymerization:**

not applicable

## 11. TOXICOLOGICAL INFORMATION

### Acute Eye Irritation:

#### Toxicological Information and Interpretation:

eye - eye irritation, 100 mg, rabbit. Slightly irritating.

### Acute Skin Irritation:

#### Toxicological Information and Interpretation:

skin - skin irritation, 500 mg, rabbit. Mildly irritating.

### Acute Dermal Toxicity:

#### Toxicological Information and Interpretation:

LD50 - lethal dose 50% of test species, > 2000 mg/kg, rabbit.

### Acute Respiratory Irritation:

No test data found for product.

### Acute Inhalation Toxicity:

No test data found for product.

### Acute Oral Toxicity:

#### Toxicological Information and Interpretation:

LD50 - lethal dose 50% of test species, > 5000 mg/kg, rat.

### Chronic Toxicity:

This product does not contain any substances that are considered by OSHA, NTP, IARC or ACGIH to be "probable" or "suspected" human carcinogens.

No additional test data found for product.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicological Information:

No data found for product.

### Chemical Fate Information:

No data found for product.

## 13. DISPOSAL CONSIDERATIONS

### Waste Disposal Method:

Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material.

**EPA Hazardous Waste - NO**

## 14. TRANSPORTATION INFORMATION

### Transportation Status: **IMPORTANT!** Statements below provide additional data on listed DOT classification.

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

### US Department of Transportation

Shipping Name:

NOT REGULATED

## 15. REGULATORY INFORMATION

### Inventory Status

Inventory	Status
UNITED STATES (TSCA)	Y
CANADA (DSL)	Y
EUROPE (EINECS/ELINCS)	Y
AUSTRALIA (AICS)	Y
JAPAN (MITI)	Y
SOUTH KOREA (KECL)	Y

Y = All ingredients are on the inventory.

E = All ingredients are on the inventory or exempt from listing.

P = One or more ingredients fall under the polymer exemption or are on the no longer polymer list. All other ingredients are on the inventory or exempt from listing.

N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing.



## FEDERAL REGULATIONS

### Inventory Issues:

All functional components of this product are listed on the TSCA Inventory.

### SARA Title III Hazard Classes:

Fire Hazard	- NO
Reactive Hazard	- NO
Release of Pressure	- NO
Acute Health Hazard	- NO
Chronic Health Hazard	- NO

## OTHER FEDERAL REGULATIONS:

### FDA Status:

This product meets the compositional requirements of:  
21 CFR 182.1217 CALCIUM PHOSPHATE

### STATE REGULATIONS:

This product does not contain any components that are regulated under California Proposition 65.

## 16. OTHER INFORMATION

### National Fire Protection Association Hazard Ratings--NFPA(R):

- 0 Health Hazard Rating--Minimal
- 0 Flammability Rating--Minimal
- 0 Instability Rating--Minimal

### National Paint & Coating Hazardous Materials Identification System--HMIS(R):

- 0 Health Hazard Rating--Minimal
- 0 Flammability Rating--Minimal
- 0 Reactivity Rating--Minimal

### Reason for Revisions:

Change and/or addition made to Section 4.

### Key Legend Information:

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

TLV - Threshold Limit Value

PEL - Permissible Exposure Limit

TWA - Time Weighted Average

STEL - Short Term Exposure Limit

NTP - National Toxicology Program

IARC - International Agency for Research on Cancer

ND - Not determined

RPI - INNOPHOS Established Exposure Limits

**Disclaimer:**

The information herein is given in good faith but no warranty, expressed or implied, is made.

**\*\* End of MSDS Document \*\***