



Material Safety Data Sheet

TRISODIUM PHOSPHATE, DODECAHYDRATE

Date Prepared: 2/23/09

Supersedes Date: 5/24/06

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: CANUTEC at 613-996-6666 (call collect) or INNOPHOS ECT (Emergency Communication Team) at 615-386-7816.

For Product Information:

(609) 495-2495

Product Use:

INDUSTRIAL, TEXTILES, WATER TREATMENT.

Chemical Name or Synonym:

SODIUM ORTHOPHOSPHATE DODECAHYDRATE

Molecular Formula:

$(\text{Na}_3\text{PO}_4, 12\text{H}_2\text{O})_4\text{NaOH}$

Prepared By:

Innophos Regulatory Department, (609) 495-2495.

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Reg Number	WHMIS Hazard	Percentage
TRISODIUM PHOSPHATE DODECAHYDRATE	10101-89-0	Y	100

3. HAZARDS IDENTIFICATION

A. EMERGENCY OVERVIEW:

Physical Appearance and Odor:

white granules solid, odorless.

Warning Statements:

WARNING!! SEVERE EYE IRRITANT. SKIN AND RESPIRATORY TRACT IRRITANT.

B. POTENTIAL HEALTH EFFECTS:

Acute Eye:

Severe irritant. May cause permanent damage to the cornea.

Acute Skin:

Irritant. Irritation is likely to be more severe if the skin is moist or wet.

Acute Inhalation:

May cause coughing, chest pain, shortness of breath, upper respiratory tract irritation, serious damage to lung tissue and respiratory tract.

Acute Ingestion:

May cause irritation, burns to mouth and esophagus, Aspiration of the swallowed or vomited product can cause severe pulmonary complications.

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 immediate medical attention, preferably with an ophthalmologist. If the physician is not immediately available, eye irrigation should be continued for an additional 15 minutes. If it is necessary to transport the patient to a physician and the eye needs to be bandaged, use a dry sterile cloth pad and cover both eyes.

Skin Exposure:

In case of contact, immediately wash with plenty of soap and water for at least 15 minutes. Seek medical attention. Remove

contaminated clothing and shoes while washing. Clean contaminated clothing and shoes before re-use or discard if they cannot be thoroughly cleaned.

Inhalation:

Remove victim from immediate source of exposure and assure that the victim is breathing. If breathing is difficult, administer oxygen, if available. If victim is not breathing, administer CPR (cardio-pulmonary resuscitation). Seek medical attention.

Ingestion:

If victim is conscious and alert, give 2-3 glasses of water to drink and do not induce vomiting. 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.

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.

Ingestion of large quantities of phosphate salts (over 1.0 grams for an adult) may cause an osmotic catharsis resulting in diarrhea and probable abdominal cramps. Larger doses such as 4-8 grams will almost certainly cause these effects in everyone. In healthy individuals most of the ingested salt will be excreted in the feces with the diarrhea and, thus, not cause any systemic toxicity. Doses greater than 10 grams hypothetically may cause systemic toxicity. Treatment should take into consideration both anionic and cation portion of the molecule. The following treatments should be considered for the specific group(s) of phosphate salts found in this product:

--All phosphate salts, except calcium salts, have a hypothetical risk of hypocalcemia, so calcium levels should be monitored.

--Ammonium salts have a hypothetical risk of ammonia toxicity. In addition to calcium levels, ammonia and phosphate levels should be monitored.

--Potassium salts have a hypothetical risk of hyperkalemia which can cause cardiac arrhythmia. In addition to calcium levels, potassium and phosphate levels should be monitored. Also consider continuous EKG monitoring to detect hyperkalemia.

--Sodium salts have a hypothetical risk of hypernatremia. In addition to calcium levels, sodium and phosphate levels should be monitored.

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.

Unusual Fire and Explosion Hazards:

Not combustible.

Hazardous Decomposition Materials (Under Fire Conditions):

oxides of sodium
oxides of phosphorus

6. ACCIDENTAL RELEASE MEASURES

Evacuation Procedures and Safety:

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:

Sweep or vacuum up and place in an appropriate closed container (see Section 7: Handling and Storage). Clean up residual material by washing area with water.

Environmental and Regulatory Reporting:

Runoff from fire control or dilution water may cause pollution. Prevent material from entering public sewer system or any waterways. Large spills should be handled according to a predetermined plan. For assistance in developing a plan contact the Technical Service Department using the Product Information phone number in Section 1.

7. HANDLING AND STORAGE

Minimum/Maximum Storage Temperatures:

Not Available

Handling:

Avoid direct or prolonged contact with skin and eyes. Avoid breathing dusts. Do not ingest.

ATTENTION] Potentially deadly carbon monoxide gas can form in enclosed areas or tanks when alkaline products contact materials that contain sugars. Do not enter such areas until they have been well-ventilated and carbon monoxide and oxygen

levels have been determined safe. Continue to monitor atmosphere while personnel are in enclosure.

Storage:

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

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:

TRISODIUM PHOSPHATE DODECAHYDRATE

	Notes	TWA	STEL
AIHA			5 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: local exhaust ventilation at the point of generation.

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 conditions immediately dangerous to life or health, or emergency conditions with unknown concentrations, use a full-face positive pressure air-supplied respirator equipped with an emergency escape air supply unit or use a self-contained breathing apparatus unit.

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.

Eye contact should be prevented through use of chemical safety glasses with side shields or splash proof goggles. An emergency eye wash must be readily accessible to the work area.

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 granules solid.

Odor:

odorless.

pH:

11.8 at 1 wt/wt%.

Specific Gravity:

Not Available

Water Solubility:

soluble 30 Wt/Wt% at 25 C (77 F).

Melting Point Range:

75 C (167 F)

Boiling Point Range:

Not Available

Vapor Pressure:

Not Available

Vapor Density:

Not Available

Molecular Weight:

1560

10. STABILITY AND REACTIVITY

Chemical Stability:

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

Conditions To Be Avoided:

dusting conditions

moisture

Materials/Chemicals To Be Avoided:

strong acids

magnesium

Decomposition Temperature Range:

77 C (171 F)

The Following Hazardous Decomposition Products Might Be Expected:

Decomposition Type: thermal

oxides of sodium

oxides of phosphorus

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, rabbit. Moderately to severely irritating.

Acute Skin Irritation:

Toxicological Information and Interpretation:

skin - skin irritation, rabbit. Slightly irritating.

Acute Dermal Toxicity:

No test data found for product.

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, > 7400 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:

Ecotoxicological Information and Interpretation:

EC50 - effective concentration 50% of test species, 126 mg/l/96 hr, Daphnia magna.

EC50 - effective concentration 50% of test species, 151 mg/l/96 hr, fish: Mosquitofish. Practically nontoxic.

Chemical Fate Information:

No specific biodegradation test data located. While the alkalinity of this material is readily reduced in natural waters, the resulting phosphate may persist indefinitely or incorporate into biological systems.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:

Waste Management options should first consider possible re-use or recycling opportunities. Some provinces have active "Waste Exchange" networks for re-use and recycling of wastes. Contact your local waste management companies to explore available options. All waste management activities must obey local, provincial and federal regulations. Possible disposal methods include the following:

Stabilize and solidify this material with compatible binders. Then place in a secure landfill.

14. TRANSPORTATION INFORMATION

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

This product is regulated for transportation because it contains a reportable quantity of a hazardous substance found in Appendix A to 49 CFR 172.101. Depending on the amount of the hazardous substance present, certain package sizes may be exempt from the transport regulations and can be shipped as non-regulated materials. Please check the ingredient listing found in Section 2 of this MSDS to determine if the quantity of hazardous substance present in this product would be regulated in the package size being shipped. The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

TDG Status:

Shipping Name: NON DANGEROUS

IMO Status:

Shipping Name: NOT REGULATED

IATA Status:

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.

Inventory Issues:

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

WHMIS Classification:

D-2B : TOXIC MATERIAL

This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations) and the

MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

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

- 2** Health Hazard Rating--Moderate
- 0** Flammability Rating--Minimal
- 0** Instability Rating--Minimal

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

- 2** Health Hazard Rating--Moderate
- 0** Flammability Rating--Minimal
- 0** Reactivity Rating--Minimal

Reason for Revisions:

Regulatory Review and Update.

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 ****