

MATERIAL SAFETY DATA SHEET

TRISODIUM PHOSPHATE CRYSTAL TECH

Product ID: PO202102

Revised: 07-27-2009

Replaces: 07-27-2009

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: TRISODIUM PHOSPHATE CRYSTAL TECH
Synonyms: TSP Crystals; Trisodium Phosphate Dodecahydrate; Phosphoric Acid, trisodium salt dodecahydrate
CAS Number: 10101-89-0
Chemical Family: Phosphate Salts
Formula: Na₃PO₄·12H₂O

Hydrite Chemical Co.
300 N. Patrick Blvd.
Brookfield, WI 53008-0948
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EMERGENCY RESPONSE NUMBERS:
24 Hour Emergency #: (414) 277-1311
CHEMTREC Emergency #: (800) 424-9300

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: DANGER! Causes eye burns. Causes skin irritation. Harmful if inhaled. Harmful if swallowed.

Physical State: Crystalline powder or granules.
Color: White to off-white.
Odor: No odor.

POTENTIAL HEALTH EFFECTS

Routes of Exposure: Eyes. Ingestion. Inhalation. Skin.

Target Organs: Eyes. Skin. Respiratory System. Digestive Tract.

Eye Contact: May be corrosive to the eyes. Severe irritation and burns may result. May cause: corneal injury. permanent eye damage.

Skin Contact: May cause moderate to severe irritation. Contact may cause: pain. itching. redness. swelling. blistering. burns. skin injury.

Skin Absorption: No more than slightly toxic based on toxicity studies.

Inhalation: May cause severe irritation. May irritate or burn: nose. throat. respiratory tract. May cause: coughing. wheezing. shortness of breath. chest pain. difficulty breathing. asthmatic bronchitis. chemical pneumonitis. pulmonary edema. Intense exposure may result in: destruction of mucous membranes.

Ingestion: May cause severe irritation. May irritate or burn: mouth. throat. gastrointestinal tract. May cause: nausea. vomiting. diarrhea. gastrointestinal tract damage.

Medical Conditions Aggravated by Exposure to Product: None known.

Other: Chronic: Prolonged or repeated eye and skin contact causes irritation. Injury to the esophagus from scarring may occur.

Cancer Information:

This product does not contain 0.1% or more of the known or potential carcinogens listed in NTP, IARC, or OSHA.

Potential Environmental Effects: See Section 12.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS Number</u>	<u>% by Wt.</u>
Trisodium Phosphate Dodecahydrate	10101-89-0	98 - 100 %
Sodium Hydroxide	1310-73-2	0 - 2 %

4. FIRST-AID MEASURES

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Tilt head to avoid contaminating unaffected eye. Get immediate medical attention. Remove contact lens if easy to do.

Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Do not reuse clothing and shoes until cleaned.

Inhalation: Remove to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration, preferably mouth-to-mouth. GET MEDICAL ATTENTION IMMEDIATELY.

Ingestion: If fully conscious, drink a quart of water. DO NOT induce vomiting. CALL A PHYSICIAN IMMEDIATELY. If unconscious or in convulsions, take immediately to a hospital or a physician. NEVER induce vomiting or give anything by mouth to an unconscious victim. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.

Note to Physicians:

Treatment is symptomatic and supportive.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Not combustible. For fires in area use appropriate media. For example: Alcohol foam. Carbon dioxide. Dry chemical. Water spray.

Fire Fighting Methods: Evacuate area of unprotected personnel. Wear protective clothing including NIOSH-Approved self-contained breathing apparatus. Remain upwind of fire to avoid hazardous vapors and decomposition products.

Fire and Explosion Hazards: Material will not ignite or burn.

Hazardous Combustion Products: Thermal decomposition may release: Phosphorous oxides. Sodium oxides.

6. ACCIDENTAL RELEASE MEASURES

Spill Clean-Up Procedures: Evacuate unprotected personnel from area. Maintain adequate ventilation. Follow personal protective equipment recommendations found in Section 8. Never exceed any occupational exposure limit. Sweep up material into containers and dispose of properly. Avoid dust formation. Flush remaining area with water to remove trace residue and dispose of properly. Avoid direct discharge to sewers and surface waters. Notify authorities if entry occurs.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Do not swallow. Avoid breathing vapors, mists, or dust. Do not eat, drink, or smoke in work area. Wash thoroughly after handling. Minimize dust generation and accumulation.

Storage: Store in a cool, well ventilated area, out of direct sunlight. Store in a dry location away from heat. Keep away from incompatible materials. Keep containers tightly closed. Do not store in unlabeled or mislabeled containers. Protect from moisture.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA Exposure Guidelines:

<u>Component</u>	<u>Limits</u>
Sodium Hydroxide	2 mg/m ³ TWA

ACGIH Exposure Guidelines:

<u>Component</u>	<u>Limits</u>
Sodium Hydroxide	2 mg/m ³ Ceiling

Engineering Controls: General room ventilation is required. To keep exposure below established limits, local exhaust may be necessary. Avoid creating dust or mist. Maintain adequate ventilation. Do not use in closed or

TRISODIUM PHOSPHATE CRYSTAL TECH

Product ID: PO202102

confined spaces. Keep levels below exposure limits. To determine exposure levels, monitoring should be performed regularly.

Eye/Face Protection: Wear chemical safety goggles while handling this product.

Skin Protection: Prevent contact with this product. Wear gloves and protective clothing depending on condition of use. Protective gloves: Impervious. Chemical-resistant.

Respiratory Protection: Respiratory protection must be worn when handling this product. If dust or mist is present, wear: NIOSH-Approved respirator for dusts and mists. NIOSH-Approved self-contained breathing apparatus. DO NOT exceed limits established by the respirator manufacturer. All respiratory protection programs must comply with OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements and must be followed whenever workplace conditions require a respirator's use.

Other Protective Equipment: Eye-wash station. Safety shower. Rubber apron. Chemical safety shoes. Rubber boots. Protective clothing.

General Hygiene Conditions: Wash with soap and water before meal times and at the end of each work shift.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Crystalline powder or granules.

Color: White to off-white.

Odor: No odor.

Boiling Point (deg. F): Decomposes

Freezing Point (deg. F): N.A.

Melting Point (deg. F): 163-171

Vapor Pressure (mm Hg): N.A.

Vapor Density (air=1): N.A.

Solubility in Water: Appreciable

pH: 12.0 (1% Solution @ 25C)

Specific Gravity: 1.62 g/cm³

% Volatile (wt%): 0

Evaporation Rate (nBuAc = 1): N.A.

VOC (wt%): 0

VOC (lbs/gal): 0

Viscosity: N.D.

Flash Point: None.

Flash Point Method: N.A.

Lower Explosion Limit: N.D.

Upper Explosion Limit: N.D.

Autoignition Temperature: Noncombustible

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions.

Conditions to Avoid: Avoid contact with moisture. Avoid excessive heat and open flames.

Incompatible Materials: Moisture. Acids. Aluminum. This material could be corrosive to aluminum surfaces because of high pH. Food sugars. Deadly carbon monoxide gas can form in enclosed or poorly ventilated areas or tanks when alkaline products contact food, beverage, or dairy products. Do not enter such areas until they have been well ventilated and carbon monoxide and oxygen levels have been determined to be within OSHA acceptable limits. If carbon monoxide and oxygen levels cannot be measured, wear NIOSH-approved, self-contained breathing apparatus.

Hazardous Decomposition Products: Thermal decomposition may release: Phosphorous oxides. Sodium oxides.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur under normal conditions.

11. TOXICOLOGICAL INFORMATION

TRISODIUM PHOSPHATE CRYSTAL TECH

Product ID: PO202102

<u>Component</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Inhalation LC50</u>
Trisodium Phosphate	Rat: 7400 mg/kg	No Data	No Data
Dodecahydrate			
Sodium Hydroxide	No Data	Rabbit: 1350 mg/kg	No Data

12. ECOLOGICAL INFORMATION**Ecotoxicological Information:** Extensive data, call for information.**Chemical Fate Information:** No data available.**13. DISPOSAL CONSIDERATIONS****Hazardous Waste Number:** N.A.

Disposal Method: Dispose of in accordance with all local, state and federal regulations. Dry material may be landfilled or recycled in accordance with local, state and federal regulations. Disposal methods identified are for the product as sold. For proper disposal of used material, an assessment must be completed to determine the proper and permissible waste management options permitted under applicable rules, regulations and/or laws governing your location. Since emptied containers retain product residue, follow label warnings even after container is emptied. DO NOT pressurize, cut, weld, solder, drill, grind or expose empty containers to heat, flame, sparks or other sources of ignition.

14. TRANSPORTATION INFORMATION**DOT (Department of Transportation):**

Identification Number: UN3077
Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Contains Sodium Phosphate, Tribasic)
Hazard Class: 9
Packing Group: III
Label Required: Class 9
Reportable Quantity (RQ): 5000# (Sodium phosphate, tribasic)

Note: This material is not DOT regulated in shipments of less than 5000#.**15. REGULATORY INFORMATION**

TSCA Inventory Status: Trisodium phosphate dodecahydrate appears on the U.S. EPA TSCA Inventory under the cas# representing the anhydrous form of this material (7601-54-9 trisodium phosphate, crystalline).

SARA Title III Section 311/312 Category Hazards:

<u>Immediate (Acute)</u>	<u>Delayed (Chronic)</u>	<u>Fire Hazard</u>	<u>Pressure Release</u>			<u>Reactive</u>		
Yes	No	No	No			No		
Regulated Components:		<u>CAS</u>	<u>CERCLA</u>	<u>SARA</u>	<u>SARA</u>	<u>U.S.</u>	<u>WI</u>	<u>Prop</u>
<u>Component</u>		<u>Number</u>	<u>RQ</u>	<u>EHS</u>	<u>313</u>	<u>HAP</u>	<u>HAP</u>	<u>65</u>
Trisodium Phosphate		10101-89-0	Yes	No	No	No	No	No
Dodecahydrate*								
Sodium Hydroxide		1310-73-2	Yes	No	No	No	Yes	No

***Prop 65 - May Contain the Following Trace Components**

No data available.

Note: * Reportable as sodium phosphate, tribasic.**16. ADDITIONAL INFORMATION****Hazard Rating System**

Health: 3
Flammability: 0
Reactivity: 1

TRISODIUM PHOSPHATE CRYSTAL TECH

Product ID: PO202102

* = Chronic Health Hazard

NFPA Rating System

Health: 3

Flammability: 0

Reactivity: 1

Special Hazard: None

MSDS Abbreviations

N.A. = Not Applicable

N.D. = Not Determined

HAP = Hazardous Air Pollutant

VOC = Volatile Organic Compound

C = Ceiling Limit

N.E./Not Estab. = Not Established

MSDS Prepared by: JAK

Reason for Revision: New format.

The data in this Material Safety Data Sheet relates to the specific material designated and does not relate to its use in combination with any other material or process. The data contained is believed to be correct. However, since conditions of use are outside our control it should not be taken as warranty or representation for which HYDRITE CHEMICAL CO. assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.