

Trisodium Phosphate, Dodecahydrate

LidoChem, Inc.
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MATERIAL SAFETY DATA SHEET	
MSDS#:	306
Product Code:	TSPCYP
Date Printed:	04/05/05
Review/Revision Date:	01/15/02

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SECTION I - General Information And Chemical Product Identification

Trade Name:	Trisodium Phosphate, Dodecahydrate
Chemical Name:	Tribasic, Sodium Phosphate
Chemical Formula:	4 (Na ₃ PO ₄ , 12H ₂ O) NaOH
Chemical Family:	Sodium Phosphates
Synonyms:	Sodium Orthophosphate Dodecahydrate
CAS#:	10101-89-0
D.O.T. Shipping Name:	Environmentally Hazardous Substance,Solid, N.O.S.

SECTION II - Composition/information On Ingredients

CAS#:	Common Name:	ACGIH/PPM		OSHA/PPM	
		TWA	STEL	PEL	% by Wt
10101-89-0	Tribasic, Sodium Phosphate	No	No	N/A	100%

SECTION III - Hazard(s) Identification

Route(s) of Entry:	Inhalation, Ingestion and Dermal.
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Emergency Overview

DANGER: Causes eye burns. Irritating to skin and eye and respiratory tract.
 Odorless, white granular or crystal solid
 Firefighters should wear full-face, self contained breathing apparatus and impervious protective clothing.
 Product is Not flammable or reactive.

Potential Health Effects:

WARNING: Danger! Causes eye burns. Causes skin and respiratory tract irritation.
 Acute Eye: May cause burns, irritation. 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. Aspiration of the swallowed or vomited product can cause severe pulmonary complications.
 Acute Ingestion: May causes irritation, corrosion, burns to mouth and esophagus, pulmonary complication.
 Chronic Effects: This product does not contain any ingredients designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.

Signs & Symptoms Of Exposure:

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

SECTION IV - First Aid Information

Ingestion:

If victim is conscious and alert, give 2-3 glasses of water to drink and do not induce vomiting. **Never give anything to eat or drink to someone who is unconscious, having convulsions, or unable to swallow.** 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.

Eyes:

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:

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 before reuse 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 (cardiopulmonary resuscitation). Seek medical attention.

SECTION V - Fire And Explosion Data

NFPA Hazard Ratings:	0 = minimal	1 = slight	2 = moderate	3 = serious	4 = severe	N/R = Not Rated
Health: 2	Fire: 0	Reactivity: 0	Special:	N/a		
Flash Point:	Non Combustible	Methods Used:	N/A			
Flammable Limits:	N/A	Lel:	N/A	Uel:	N/A	
Autoignition Temp:	N/A					

Extinguisher Media

Not combustible. Use media suitable to fight surrounding fire.

Special Fire Fighting Procedures

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Wear protective clothing and use self contained breathing apparatus. Dike area to prevent runoff and contamination of water sources. Evacuate residents who are downwind of fire. Fire fighters should wear NIOSH/MSHA approved self contained breathing apparatus.

Unusual Fire and Explosion Hazards

Not combustible.

Hazardous Combustion Products:

Not combustible.

Emergency Response Guidebook Information:

Section VI- Accidental Release Measures

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Wear appropriate protective gear for the situation. Sweep or vacuum up and place in an appropriate closed container. Clean up residual material by washing area with water. 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.

Section VII- Handling and Storage

Handling and Storage

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 contains 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. Store in an area that is cool, dry, well-ventilated, away from food stuffs or animal feed. Store in tightly closed containers.

Section VIII - Exposure Control and Personal Protection

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.

Respiratory Protection

When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the latest OSHA standard (29 CFR 1910.134) and/or ANSI Z88.2 recommendations.

Eye Protection

Eye/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. Emergency eye wash must accessible to work area.

Other Protection:

Minimize breathing dust. Avoid prolonged or repeated breathing of dust and contact with skin. Remove contaminated clothing; launder

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before reuse. Cleanse skin thoroughly after contact, before meals and end of work period.

Ventilation Limits:

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.

Exposure Limits

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

ACGH TLV/TWA PARTICULATES NOT OTHERWISE CLASSIFIED : 10 mg/cubic meter (INHALABLES)

ACGH TLV/TWA PARTICULATES NOT OTHERWISE CLASSIFIED: 3 mg/cubic meter (RESPIRABLE)

Hygienic Practices:

All food / smoking materials should be kept in a separate area away from the storage/use location. Eating, drinking and smoking should be prohibited in areas where there is a potential for significant exposure to this material. Before eating, drinking or smoking, hands and face should be thoroughly washed. Facilities storing or using this material should be equipped with an eyewash and safety shower.

Section IX - Physical and Chemical Properties

Molecular Weight:	1560
Boiling Point:	N/A
Melting Point:	75 deg C (167 deg F)
Specific Gravity:	Bulk density 0.9 g/ml
Vapor Pressure(mm/hg):	Nonvolatile
Vapor Density(air=1):	Nonvolatile
Reactivity In Water:	forms caustic solution
Solubility In Water:	soluble 30 wt/wt% at 25 deg C (77 F)
Appearance And Odor:	Odorless, white granular or crystal solid
Other:	pH: 11.8 wt/wt%

Section X - Stability and Reactivity**Stability:**

This material is stable under normal handling and storage conditions.

Conditions to Avoid:

Keep drums tightly sealed to avoid moisture pickup which will cause caking. Material is hygroscopic. Stable at ambient temperatures & atmospheric pressure.

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Incompatible Materials:

Strong acids. Solutions react with metals to form flammable hydrogen gas. May react violently with magnesium. This material, upon contact with certain food products or their residues which contain reducing sugars, may react to form deadly carbon monoxide.

Hazardous Decomposition Products:

Decomposition products may be hazardous. These may include phosphorus oxides and sodium oxide. In aqueous solution, may react with certain metals to form flammable hydrogen gas. Decomposition Temperature Range: 77 deg C (171 deg F)

Polymerization Conditions To Avoid:

N/A

Section XI - Toxicological Information

Eye Effects:

Acute: eye irritation, rabbit. Corrosive.

Skin Effects:

Acute: skin irritation, rabbit. Corrosive - 24 hour covered exposure, moist skin. Nonirritating - 4 hour uncovered exposure, dry skin.

Dermal Toxicity:

No test data found for product.

Inhalation Effects:

No test data found for product.

Sensitization:

Not a sensitizer.

Ingestion Effects:

LD50 - lethal dose 50% of test species, 7400 mg/kg, rat.

Carcinogenicity/Mutagenicity:

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

No information found on Mutagenicity.

Reproductive Effects:

No data found for product.

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Neurotoxicity:

No data found for product.

Target Organs:

No data found for product.

Additional Toxicological Information:

No additional information found for this product.

Section XII- Ecological Information

Biodegradability:	No data found for product.
Ecotoxicity:	No data found for product.
Biological Oxygen Demand(BOD5):	No data found for product.
Chemical Oxygen Demand:	No data found for product.
Activated Sludge Respiration Inhibition Test:	No data found for product.

Additional Ecological Information:

No additional information.

SECTION XIII - Disposal Considerations

Waste Disposal Methods:

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.

Container Disposal Information:

Please be advised that state and local requirements for container disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of container.

Section XIV - Transport Information

Proper Shipping Name:	Environmentally Hazardous Substance,Solid, N.O.S.		
D. O. T. Hazard Class:	Environmentally Hazardous	UN:	3077
Label Requirement:	Class 9 (Miscellaneous)	RQ:	5,000 lbs. (2,270 kgs)
Placard:	Class 9		
Packing Group:	III	CAS:	10101-89-0

Section XV - Regulatory Information

For Chemical Emergencies Call CHEMTREC - Day or Night - at 800 424 9300.

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Section XV Regulatory Information

State Right To Know Laws:

The following ingredients are disclosed for compliance with State Right to Know Laws:

CAS#	Chemical Name	State RTK
10101-89-0	Sodium Phosphate, Tribasic Phosphoric Acid Trisodium salt, dodecahydrate	PA, MA

SARA Title III Hazard Classes Sections 311/312:

Immediate (acute) health hazard

OSHA Status:

This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910,1200.

SARA Title III Hazard Classes Section 302 - EXTREMELY HAZARDOUS SUBSTANCES:

This product does NOT contain ingredients listed in Appendix A and B as Extremely Hazardous substances.

TSCA Status:

Listed/Non-reportable

SARA Section 313 :

This product does not contain any toxic chemical subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right to Know Act.

CAS#	Chemical Name:

Cercla, 40 Cfr 117, 302:

This product contains ingredients specified in the List of Extremely Hazardous Substances. These ingredients are listed below.

Cercla Listed Substances Are:

Trisodium Phosphate Dodecahydrate

SARA Superfund Section 110:

This product does NOT contain ingredients listed as hazardous substances on the Priority List of CERCLA Hazardous substances.

California Proposition 65:

This product does NOT contain any chemicals which require warning under California Proposition 65.

Michigan Critical Materials:

This product does NOT contain ingredients listed on the Michigan Critical Materials Register.

CAA: None known.

CWA: Listed on the CWA, RQ 5000

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RCRA:	Not considered a hazardous waste
Canada CEPA:	All intentional ingredients are listed on the DSL.
Canada WHMIS:	Not controlled.

SECTION XVI- Other Information

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.

NOTICE: OSHA STANDARD 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a Hazard Communication Program including training, labeling, Material Safety Data Sheets, and access to written records. We request that you, and it is your legal duty, make all information in this Material Safety Data Sheet available to your employees.

Key Legend Information:

N/Av:	Not Available	N/Ap:	Not Applicable
N/R:	Not Rated	ND:	Not Determined
ACGI:	American Conference of Gov'ntal Industrial Hygienists	TLV:	Threshold Limit Value
OSHA:	Occupational Safety and Health Administration	TWA:	Time Weighted Average
PEL:	Permissible Exposure Limit	NTP:	National Toxicology Program
STEL:	Short Term Exposure Limit		
IARC:	International Agency for Research on Cancer		
SARA Title III:	Superfund Amendments and Reauthorization Act		
CERCLA:	Comprehensive Response, Compensation and Liability Act		
TSCA:	Toxic Substance Control Act		

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind expressed or implied is made with respect to the information contained herein. This Material Safety Data Sheet was prepared to comply with OSHA Hazard Communication standard. (29 CFR 1910.1200). This supersedes any previous information. Since the actual use by others is beyond our control, no guarantee, expressed or implied, is made by LidoChem, Inc. as to the effects of such use or the results to be obtained, nor does LidoChem, Inc. assume any liability arising out of use, by others, of the products referred to herein. Nor is the information herein to be construed as absolutely complete since additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist because of applicable laws or government regulations. All LidoChem, Inc. MSDS's are reviewed every three years or sooner if necessary. Please check the Review Date on Page 1 for most current version. Please request a new MSDS from LidoChem, Inc. if the date is older than 3 years.

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