Material Safety Data Sheet
Sodium Phosphate Tribasic Dodecahydrate

ACC# 24500

Section 1 - Chemical Product and Company Identification

**MSDS Name:** Sodium Phosphate Tribasic Dodecahydrate  
**Catalog Numbers:** AC9537671, NC9075979, NC9471611, NC9689468, NC9801205, NC9810137, NC9873229, S376-3, S376-50, S377-3, S377-50, S377-500, XXS377PD12KG  
**Synonyms:** Trisodium orthophosphate dodecahydrate; Sodium phosphate tribasic dodecahydrate; Trisodium phosphate dodecahydrate; TSP dodecahydrate.

**Company Identification:**  
Fisher Scientific  
1 Reagent Lane  
Fair Lawn, NJ 07410  
**For information, call:** 201-796-7100  
**Emergency Number:** 201-796-7100  
**For CHEMTREC assistance, call:** 800-424-9300  
**For International CHEMTREC assistance, call:** 703-527-3887

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
<th>EINECS/ELINCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>10101-89-0</td>
<td>Tribasic sodium phosphate dodecahydrate</td>
<td>100</td>
<td>unlisted</td>
</tr>
</tbody>
</table>

**Hazard Symbols:** XI  
**Risk Phrases:** 36/37/38

Section 3 - Hazards Identification

**EMERGENCY OVERVIEW**

Appearance: colorless or white solid. **Warning!** Causes eye and skin irritation. Causes respiratory tract irritation.  
**Target Organs:** Respiratory system, eyes, skin.

**Potential Health Effects**  
**Eye:** Causes eye irritation. May cause transient corneal injury.  
**Skin:** Causes skin irritation.  
**Ingestion:** Causes digestive tract irritation.  
**Inhalation:** Causes respiratory tract irritation.  
**Chronic:** Chronic inhalation may cause effects similar to those of acute inhalation. Effects may be delayed.

Section 4 - First Aid Measures

https://fscimage.fishersci.com/msds/24500.htm  
10/27/2004
**Eyes:** Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).

**Skin:** Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes.

**Ingestion:** Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

**Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

**Notes to Physician:** Treat symptomatically and supportively.

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**Section 5 - Fire Fighting Measures**

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Material will not burn.

**Extinguishing Media:** Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not applicable.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 2; Flammability: 0; Instability: 0

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**Section 6 - Accidental Release Measures**

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

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**Section 7 - Handling and Storage**

**Handling:** Wash thoroughly after handling. Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale. Use with adequate ventilation. Discard contaminated shoes.

**Storage:** Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from strong acids.

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**Section 8 - Exposure Controls, Personal Protection**

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an
eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

### Exposure Limits

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
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</thead>
<tbody>
<tr>
<td>Tribasic sodium phosphate dodecahydrate</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>Trisodium phosphate, anhydrous</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

**OSHA Vacated PELs:** Tribasic sodium phosphate dodecahydrate: No OSHA Vacated PELs are listed for this chemical. Trisodium phosphate, anhydrous: No OSHA Vacated PELs are listed for this chemical.

**Personal Protective Equipment**

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

### Section 9 - Physical and Chemical Properties

**Physical State:** Solid

**Appearance:** colorless or white

**Odor:** odorless

**pH:** 11.9 @ 1% solution

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** Not available.

**Freezing/Melting Point:** 167 deg F

**Decomposition Temperature:** Not available.

**Solubility:** Soluble.

**Specific Gravity/Density:** 1.62 @ 68°F

**Molecular Formula:** Na₃PO₄.12H₂O

**Molecular Weight:** 380.11

### Section 10 - Stability and Reactivity

**Chemical Stability:** Stable at room temperature in closed containers under normal storage and handling conditions.

**Conditions to Avoid:** High temperatures, dust generation.

**Incompatibilities with Other Materials:** Strong acids.

**Hazardous Decomposition Products:** Oxides of phosphorus, sodium oxide.

**Hazardous Polymerization:** Has not been reported.

### Section 11 - Toxicological Information

https://fscimage.fishersci.com/msds/24500.htm

10/27/2004
RTECS#:  
CAS# 10101-89-0: TC9575000  
CAS# 7601-54-9: TC9490000  
LD50/LC50:  
CAS# 10101-89-0:  
Oral, rat: LD50 = 7400 mg/kg;  
CAS# 7601-54-9:  
Carcinogenicity:  
CAS# 10101-89-0: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA. CAS# 7601-54-9: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.  
Epidemiology: No information available.  
Teratogenicity: No information available.  
Reproductive Effects: No information available.  
Neurotoxicity: No information available.  
Mutagenicity: No information available.  
Other Studies: See actual entry in RTECS for complete information.  

Section 12 - Ecological Information  
Ecotoxicity: No data available. No information available.  
Environmental: Phosphates promote the eutrophication of lakes and other bodies of water.  
Physical: No information available.  
Other: No information available.  

Section 13 - Disposal Considerations  
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.  
RCRA P-Series: None listed.  
RCRA U-Series: None listed.  

Section 14 - Transport Information  

<table>
<thead>
<tr>
<th>US DOT</th>
<th>IATA</th>
<th>RID/ADR</th>
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<th>Canada TDG</th>
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<td>FLASHPOINT 47 C</td>
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</table>
US FEDERAL

TSCA
CAS# 10101-89-0 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form is on the inventory (40CFR720.3(u)(2)).
CAS# 7601-54-9 is listed on the TSCA inventory.

Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.

Section 12b
None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.

SARA

CERCLA Hazardous Substances and corresponding RQs
CAS# 10101-89-0: 5000 lb final RQ (Listed under 'Sodium phosphate, tribasic'); 2270 kg final
CAS# 7601-54-9: 5000 lb final RQ (Listed under 'Sodium phosphate, tribasic'); 2270 kg final

SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.

SARA Codes
CAS # 10101-89-0: acute. CAS # 7601-54-9: acute.

Section 313
No chemicals are reportable under Section 313.

Clean Air Act:
This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

Clean Water Act:
CAS# 10101-89-0 is listed as a Hazardous Substance under the CWA. CAS# 7601-54-9 is listed as a Hazardous Substance under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.

STATE
CAS# 10101-89-0 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Massachusetts.
CAS# 7601-54-9 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.
California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols:
XI

Risk Phrases:
R 36/37/38 Irritating to eyes, respiratory system and skin.

Safety Phrases:
S 26 In case of contact with eyes, rinse immediately

with plenty of water and seek medical advice. S 37/39 Wear suitable gloves and eye/face protection.

**WGK (Water Danger/Protection)**
CAS# 10101-89-0: 1
CAS# 7601-54-9: 1

**Canada - DSL/NDSL**
CAS# 7601-54-9 is listed on Canada's DSL List.

**Canada - WHMIS**
This product has a WHMIS classification of D2B.

**Canadian Ingredient Disclosure List**

**Exposure Limits**

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**Section 16 - Additional Information**

**MSDS Creation Date:** 12/12/1997  
**Revision #7 Date:** 8/13/2002

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, however arising, even if Fisher has been advised of the possibility of such damages.