1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Sodium phosphate, tribasic dodecahydrate
Cat No.: S376-3; S376-50; S377-3; S377-3LC; S377-50; S377-500; S377-500LC
Synonyms: Trisodium phosphate dodecahydrate (Granular/Crystalline/Technical/Certified ACS)
Recommended Use: Laboratory chemicals
Company: Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number
CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 703-527-3887

2. HAZARDS IDENTIFICATION

DANGER!

Emergency Overview
Causes severe burns by all exposure routes.

Appearance: White
Physical State: Solid
odor: odorless

Target Organs
Skin, Respiratory system, Eyes, Gastrointestinal tract (GI)

Potential Health Effects

Acute Effects

Principle Routes of Exposure

<table>
<thead>
<tr>
<th>Route</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyes</td>
<td>Causes severe burns.</td>
</tr>
<tr>
<td>Skin</td>
<td>Causes severe burns. May be harmful in contact with skin.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Causes severe burns. May be harmful if inhaled.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Causes severe burns. May be harmful if swallowed.</td>
</tr>
</tbody>
</table>

Chronic Effects
None known.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions
No information available.
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Haz/Non-haz</th>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tribasic sodium phosphate dodecahydrate</td>
<td>10101-89-0</td>
<td>&gt;95</td>
</tr>
<tr>
<td></td>
<td>Trisodium phosphate</td>
<td>7601-54-9</td>
<td>-</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Skin Contact
Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.

Inhalation
Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.

Ingestion
Do not induce vomiting. Call a physician or Poison Control Center immediately.

Notes to Physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point
No information available.

Method
No information available.

Autoignition Temperature
No information available.

Explosion Limits
Upper: No data available
Lower: No data available

Suitable Extinguishing Media
CO₂, dry chemical, dry sand, alcohol-resistant foam.

Unsuitable Extinguishing Media
No information available.

Hazardous Combustion Products
No information available.

Sensitivity to mechanical impact
No information available.

Sensitivity to static discharge
No information available.

Specific Hazards Arising from the Chemical
Keep product and empty container away from heat and sources of ignition

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA
Health 3  Flammability 1  Instability 0  Physical hazards N/A
6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Ensure adequate ventilation. Use personal protective equipment. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Avoid dust formation.

Environmental Precautions
Should not be released into the environment.

Methods for Containment and Clean Up
Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

7. HANDLING AND STORAGE

Handling
Use only under a chemical fume hood. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Avoid dust formation. Do not breathe vapors/dust. Do not ingest.

Storage
Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Measures
Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.

Exposure Guidelines
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

NIOSH IDLH: Immediately Dangerous to Life or Health

Personal Protective Equipment

Eye/face Protection
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 and body protection
Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State
Solid

Appearance
White

odor
odorless

Odor Threshold
No information available.

pH
11.8-12 1% aq. solution

Vapor Pressure
No information available.

Vapor Density
No information available.

Viscosity
No information available.

Boiling Point/Range
No information available.

Melting Point/Range
75°C / 167°F

Decomposition temperature
>75 °C

Flash Point
No information available.

Evaporation Rate
No information available.

Specific Gravity
1.620

Solubility
Soluble in water
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>log Pow</td>
<td>No data available</td>
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<tr>
<td>Molecular Weight</td>
<td>380.13</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>Na₃O₄P·12H₂O</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Stability
Stable under normal conditions.

Conditions to Avoid

Incompatible Materials
Strong oxidizing agents

Hazardous Decomposition Products
Carbon monoxide (CO), Carbon dioxide (CO₂)

Hazardous Polymerization
Hazardous polymerization does not occur.

Hazardous Reactions
None under normal processing.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

<table>
<thead>
<tr>
<th>Component Information</th>
<th>LD₅₀ Oral</th>
<th>LD₅₀ Dermal</th>
<th>LC₅₀ Inhalation</th>
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</thead>
<tbody>
<tr>
<td>Tribasic sodium phosphate dodecahydrate</td>
<td>7400 mg/kg (Rat)</td>
<td>Not listed</td>
<td>Not listed</td>
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<tr>
<td>Trisodium phosphate</td>
<td>2000 mg/kg (Rat)</td>
<td>2 mg/kg (Rabbit)</td>
<td>2.16 mg/L (Rat) 1 h</td>
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</tbody>
</table>

Irritation
Causes severe burns by all exposure routes

Toxicologically Synergistic Products
No information available.

Chronic Toxicity

Carcinogenicity
There are no known carcinogenic chemicals in this product

Sensitization
No information available.

Mutagenic Effects
No information available.

Reproductive Effects
No information available.

Developmental Effects
No information available.

Teratogenicity
No information available.
Other Adverse Effects

The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

Endocrine Disruptor Information

No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Do not empty into drains.

Persistence and Degradability

No information available

Bioaccumulation/Accumulation

No information available

Mobility

No information available

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. TRANSPORT INFORMATION

DOT

UN-No UN3262
Proper Shipping Name CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.
Proper technical name Tribasic sodium phosphate dodecahydrate, Trisodium phosphate
Hazard Class 8
Packing Group II

TDG

UN-No UN3262
Proper Shipping Name CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.
Hazard Class 8
Packing Group II

IATA

UN-No UN3262
Proper Shipping Name Corrosive solid, basic, inorganic, n.o.s
Hazard Class 8
Packing Group II

IMDG/IMO
14. TRANSPORT INFORMATION

UN-No
UN3262
Proper Shipping Name
Corrosive solid, basic, inorganic, n.o.s
Hazard Class
8
Packing Group
II

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>CHINA</th>
<th>KECL</th>
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<tbody>
<tr>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>-</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td></td>
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<td>Trisodium phosphate</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>231-509-8</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>KE-34912</td>
<td>X</td>
</tr>
</tbody>
</table>

Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable
SARA 313 Not applicable
SARA 311/312 Hazardous Categorization
Acute Health Hazard
Yes
Chronic Health Hazard
No
Fire Hazard
No
Sudden Release of Pressure Hazard
No
Reactive Hazard
No

Clean Water Act

<table>
<thead>
<tr>
<th>Component</th>
<th>CWA - Hazardous Substances</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tribasic sodium phosphate dodecahydrate</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Component CWA - Hazardous Substances CWA - Reportable Quantities CWA - Toxic Pollutants CWA - Priority Pollutants
---
Trisodium phosphate X 5000 lb - -

Clean Air Act
Not applicable

OSHA
Not applicable

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

<table>
<thead>
<tr>
<th>Component</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA EHS RQs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tribasic sodium phosphate dodecahydrate</td>
<td>5000 lb</td>
<td>-</td>
</tr>
<tr>
<td>Trisodium phosphate</td>
<td>5000 lb</td>
<td>-</td>
</tr>
</tbody>
</table>

California Proposition 65
This product does not contain any Proposition 65 chemicals.

State Right-to-Know

<table>
<thead>
<tr>
<th>Component</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tribasic sodium phosphate dodecahydrate</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Trisodium phosphate</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

U.S. Department of Transportation
Reportable Quantity (RQ): Y
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security
This product does not contain any DHS chemicals.

Other International Regulations

<table>
<thead>
<tr>
<th>Mexico - Grade</th>
<th>No information available</th>
</tr>
</thead>
</table>

Canada
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class
E Corrosive material
16. OTHER INFORMATION

Prepared By
Regulatory Affairs
Thermo Fisher Scientific
Tel: (412) 490-8929

Creation Date
02-Feb-2010

Print Date
02-Feb-2010

Revision Summary
“***”, and red text indicates revision

Disclaimer
The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS