

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Trisodium Phosphate Dodecahydrate - ACS Reagent Grade
Synonyms: trisodium phosphate dodecahydrate
CAS Number: 10101-89-0
Grade/Purity: ACS Reagent Grade
Product Type: Salts
Product Use: Industrial, Manufacturing or Laboratory use
Manufacturer/Supplier: Alliance Chemical, 204 South Edmond St, Taylor, Texas 76574
Information: 512-365-6838 | www.alliancechemical.com
Emergency: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

Signal Word: Danger

GHS Pictograms:



Hazard Statements:

H314 (20.8%)	Causes severe skin burns and eye damage [Danger Skin corrosion/irritation]
H315 (74.6%)	Causes skin irritation [Warning Skin corrosion/irritation]
H319 (77.8%)	Causes serious eye irritation [Warning Serious eye damage/eye irritation]
H335 (44.9%)	May cause respiratory irritation [Warning Specific target organ toxicity, single exposure; Respiratory tract irritation]

Precautionary Statements:

P260,	P261, P264, P264+P265, P271, P280, P301+P330+P331, P302+P352, P302+P361+P354, P304+P340, P305+P351+P338, P305+P354+P338, P316, P319, P321, P332+P317, P337+P317, P362+P364, P363, P403+P233, P405, and P501
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3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	% MIN	% MAX	CAS #	EINECS# / ELINCS#	FORMULA	MOLECULAR WEIGHT
Trisodium Phosphate Dodecahydrate	98	100.5	10101-89-0	231-509-8	H ₂₄ Na ₃ O ₁₆ P	380.12 g/mol

4. FIRST-AID MEASURES

Eyes	Rinse with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention immediately.
Skin	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing. Wash with soap. Get medical attention immediately.
Inhalation	Move person to fresh air and keep comfortable for breathing. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
Ingestion	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

Suitable Media	Use water spray, alcohol-resistant foam, dry chemical, or CO ₂ . Use measures appropriate to local circumstances.
Unsuitable Media	Do not use a solid water stream as it may scatter and spread fire.
Protective Equipment	Wear self-contained breathing apparatus and full protective clothing.
Combustion Products	May include carbon oxides and other toxic fumes. See Section 10.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use PPE as described in Section 8. Ensure adequate ventilation. Evacuate personnel to safe areas.
Environmental	Prevent leakage or spillage from entering drains, sewers, or waterways.
Containment & Cleanup	Absorb with inert material. Collect in appropriate waste container. Dispose per applicable regulations.

7. HANDLING AND STORAGE

Safe Handling	Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Keep container closed when not in use.
Safe Storage	Store in a cool, dry, well-ventilated area. Keep away from incompatible materials (see Section 10). Keep containers tightly closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use adequate ventilation. Provide eyewash stations and quick-drench showers accessible to areas of use.

Occupational Exposure Limits:

No established occupational exposure limits.

Eyes	Wear chemical safety goggles or face shield.
Skin	Wear chemical-resistant gloves and protective clothing.
Inhalation	Use NIOSH-approved respirator if exposure limits are exceeded or irritation occurs.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	White crystalline powder, hygroscopic
Odor	Characteristic
Median Particle Size	Not Available
Particle Size Distribution	Not Available
Particle Shape	Not Available
Surface Area	Not Available
Dustiness	Not Available
Hygroscopicity	Not Available
pH	Not Available
Melting Point	73°C (163.4°F)
Boiling Point	100°C (212°F)
Flash Point	Not Available
Vapor Pressure	Not Available
Specific Gravity	Not Available
Solubility	Soluble in water
Molecular Formula	H ₂₄ Na ₃ O ₁₆ P
Molecular Weight	380.12 g/mol

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions.
Hazardous Reactions	None under normal processing conditions.
Conditions to Avoid	Heat, sparks, open flame, and incompatible materials.
Incompatible Materials	Strong oxidizing agents, strong acids, strong bases.
Decomposition Products	May produce carbon oxides and other toxic fumes when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity: See Section 2 for GHS hazard classification.

IARC	Not listed as carcinogen.
NTP	Not listed as carcinogen.
OSHA	Not listed as carcinogen.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Fish LC50: 28.5 mg/L (96 h, <i>Gambusia affinis</i> — pH-driven; data for ANHYDROUS TSP (7601-54-9), bridged (24-h 88.3 mg/L; pH 7.4–10.3))
Persistence	Toxicity pH-driven (strongly alkaline in water); endpoints reported under anhydrous TSP (CAS 7601-54-9)
Bioaccumulation	Not Available
Mobility in Soil	Not Available

13. DISPOSAL CONSIDERATIONS

Dispose of contents/container in accordance with applicable federal, state, and local regulations. Do not dispose of into drains or waterways.

14. TRANSPORT INFORMATION

US DOT	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.
IATA/ICAO	Not regulated as dangerous goods.
Marine Pollutant	No
Note	Hazard communication note: Product may meet GHS hazard criteria for workplace handling, while not being regulated as dangerous goods for transport.

15. REGULATORY INFORMATION

Regulatory listings not yet on file in this system; consult OSHA, EPA TSCA, EPCRA TRI, and California OEHHA directly.

SARA 311/312	See Section 2 for hazard classifications.
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16. OTHER INFORMATION

Revision Date: 07/01/2026

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