

Specification Sheet

Chemical Name		CAS No.
Tris(trimethylsilyl) Phosphate (TMSP)		10497-05-9
Testing Parameters	Testing Method	Specification
Appearance	Visual Inspection	Colorless, clear liquid
APHA Color	UV-Vis	≤20
Metal Content (ppm)	ICP	≤100
Purity (wt%)	GC	≥99.50
Acidity/HF (ppm)	Titration	≤20



Safety Data Sheet (SDS)**Tris(trimethylsilyl) Phosphate (TMSP)****SECTION 1: IDENTIFICATION****Product Name:** Tris(trimethylsilyl) Phosphate**CAS Number:** 10497-05-9**Recommended Use:** Laboratory reagent, electrolyte additive, flame retardant for lithium batteries**Supplier:** Automat Solutions, Inc.**Emergency Contact:** 510-982-6488**SECTION 2: HAZARD IDENTIFICATION****GHS Classification:**

- Flammable liquids – Category 3
- Skin irritation – Category 2
- Eye irritation – Category 2A

Signal Word: Warning**Hazard Statements:**

- H226: Flammable liquid and vapor.
- H315: Causes skin irritation.
- H319: Causes serious eye irritation.

Precautionary Statements:

- Keep away from heat/sparks/open flames/hot surfaces. No smoking.
- Keep container tightly closed.
- Ground/bond container and receiving equipment.
- Use explosion-proof electrical/ventilating/lighting equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Wear protective gloves/eye protection/face protection.



- IF ON SKIN: Take off immediately all contaminated clothing. Rinse skin with water/shower.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
- Store in a well-ventilated place. Keep cool.
- Dispose of contents/container to an approved waste disposal plant.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number	% Composition
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Tris(trimethylsilyl) Phosphate	10497-05-9	≥90 - ≤100%
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SECTION 4: FIRST AID MEASURES

Inhalation: Remove person to fresh air and keep comfortable for breathing. Get medical attention if unwell.

Skin Contact: Remove contaminated clothing immediately. Rinse skin with water. Get medical advice if irritation occurs.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Get medical attention if irritation persists.

Ingestion: Rinse mouth. Call a poison center or doctor if you feel unwell.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media: Dry powder, foam, water spray, CO₂

Hazards: Flammable liquid and vapor.

Special Protective Equipment: Wear self-contained breathing apparatus and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear protective equipment. Evacuate personnel from leak area. Ensure ventilation.

Environmental Precautions: Prevent from entering drains.

Cleanup Methods: Absorb with inert material. Dispose of according to local regulations.

SECTION 7: HANDLING AND STORAGE

Handling: Avoid contact with skin and eyes. Use explosion-proof equipment. Take precautions against static discharge. Wash hands after handling.



Storage: Store in a cool, dry, well-ventilated area. Keep container tightly closed. Protect from moisture. Store under inert gas.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits: None established.

Engineering Controls: Use local exhaust ventilation, safety shower, and eye bath.

PPE:

- Respiratory Protection: Gas mask
- Hand Protection: Protective gloves
- Eye Protection: Safety goggles, face shield
- Skin Protection: Protective suit

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance:** Colorless to yellow liquid
- **Boiling Point:** 236°C
- **Flash Point:** 24°C
- **Relative Density:** 0.96
- **Solubility:** No data available
- **Molecular Weight:** 314.54 g/mol

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable under normal conditions

Conditions to Avoid: Heat, flame, spark, moisture, static discharge

Incompatible Materials: Oxidizing agents

Decomposition Products: CO, CO₂, silicon oxides, phosphorus oxides

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity: LD50 (oral, rat): 3440 mg/kg

Skin Irritation: Causes irritation

Eye Irritation: Causes serious eye irritation

Carcinogenicity: Not classified by IARC, NTP, or OSHA

Other Data: No information on sensitization, mutagenicity, or reproductive toxicity



SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: No data available

Persistence and Degradability: No data available

Bioaccumulative Potential: No data available

Mobility in Soil: No data available

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose in accordance with local, regional, national, and international regulations. Handle ignitable residues with care.

SECTION 14: TRANSPORT INFORMATION

UN Number: UN1993

Proper Shipping Name: Flammable liquid, n.o.s.

Hazard Class: 3

Packing Group: III

Marine Pollutant: No

ERG Code: 128

SECTION 15: REGULATORY INFORMATION

SARA 311/312 Hazards: No SARA Hazards

SARA 313: No components subject to reporting

Clean Air Act: Not an ODS or HAP

TSCA: Listed

State Regulations: PA RTK: Tris(trimethylsilyl) Phosphate 10497-05-9

SECTION 16: OTHER INFORMATION

Revision Date: 5/10/2025

Disclaimer: This SDS is based on currently available information. Users must ensure compliance with local laws and best practices. Product must be handled by trained professionals with proper safety procedures.

