

# Safety Data Sheet

## Phosphomolybdic Acid-Phosphotungstic Acid Solution

### Section 1 - Chemical Product and Company Identification

**SDS Name:** Phosphomolybdic Acid-Phosphotungstic Acid Solution (PMA-PTA)

**Catalog Numbers:** SO-919, F-364-1, F-367-4

**Company Identification:** Transene Company, Inc., DBA ROWLEY BIOCHEMICAL, Inc.  
10 ELECTRONICS AVENUE  
DANVERS, MA 01923

**For information, call:** 978-739-4883

**Emergency Number:** 800-424-9300

**For CHEMTREC assistance, call:** 800-424-9300

### Section 2 - Hazards Identification

#### GHS Classifications

H314-Skin corrosion/irritation: 1B

H318-Serious eye damage/eye irritation: 1

2.5% of the mixture consists of ingredients of unknown acute oral toxicity.

5% of the mixture consists of ingredients of unknown acute dermal toxicity.

5% of the mixture consists of ingredients of unknown acute inhalation toxicity.

#### Pictograms or Hazard symbols and Hazard statement(s):



Signal Word: Danger

#### Hazard Statements:

H314-Causes severe skin burns and eye damage

H318-Causes serious eye damage

## Precautionary Statements:

P260-Do not breathe dusts or mists.

P264-Wash thoroughly after handling.

P280-Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331-If swallowed: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353-If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+P340-If inhaled: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338-If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310-Immediately call a Poison Center/doctor.

P363-Wash contaminated clothing before reuse.

P405-Store locked up.

P501-Dispose of contents/container in accordance with local/regional/national/international regulations.

### Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent
51429-74-4	Phosphomolybdic Acid Hydrate	2.5 w/v
12501-23-4	Phosphotungstic Acid Hydrate	2.5 w/v
7732-18-5	Water	Balance

### Section 4 - First Aid Measures

**Eye Exposure:** In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Get immediate medical attention.

**Dermal Exposure:** In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention.

**Oral Exposure:** If swallowed, get immediate medical advice. Do not induce vomiting. Rinse mouth with water and drink small quantities of water (stop if the exposed person feels sick as vomiting may be dangerous).

**Inhalation Exposure:** If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

### 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. During a fire, irritating gases may be generated by thermal decomposition or combustion.

**Extinguishing Media:** Use dry chemical, carbon dioxide, dry sand, water spray, or alcohol-resistant foam.

**Hazardous Combustion Products:** Phosphorus oxides, molybdenum oxides, irritating and potentially hazardous fumes and gases.

**Flash Point:** Not available

**Autoignition Temperature:** Not available

**Explosion Limits, Lower:** Not available

**Upper:** Not available

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

## Section 6 - Accidental Release Measures

### **Procedure(s) of Personal Precaution(s):**

Wear personal protective equipment. Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Ensure adequate ventilation.

**Methods for Cleaning up:** Absorb with sand, earth, or vermiculite. Carefully sweep up and containerize for proper disposal. Do not release to the environment. Do not release to drains.

## Section 7 - Handling and Storage

Use care when handling. Wear personal protective equipment. Wash thoroughly after handling. Ensure adequate ventilation. Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Avoid direct sunlight. Keep in a tightly closed container. Store in a cool, dry, and well-ventilated area. Keep away from incompatible materials.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

### **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.

### Exposure Limits:

Chemical Name	ACGIH - TLV	NIOSH - IDLH	OSHA - PELs
Phosphomolybdic Acid Hydrate CAS#51429-74-4	0.5 mg/m <sup>3</sup> TWA	1000 mg/m <sup>3</sup> IDLH	5 mg/m <sup>3</sup> TWA (vacated)
Phosphotungstic Acid Hydrate CAS#12501-23-4	3 mg/m <sup>3</sup> TWA	5 mg/m <sup>3</sup> TWA 10 mg/m <sup>3</sup> STEL	5 mg/m <sup>3</sup> TWA (vacated) 10 mg/m <sup>3</sup> STEL (vacated)

### Section 9 - Physical and Chemical Properties

**Physical State:** Liquid

**Appearance:** Yellow

**Odor:** Odorless

**Vapor Pressure:** Not available

**Odor Threshold:** Not available

**Vapor Density:** Not available

**pH:** 1.0-1.4

**Relative Density:** Not available

**Melting point/freezing point:** Not available

**Solubility:** Soluble in water

**Boiling Point:** Not available

**Flash Point:** Not available

**Evaporation Rate:** Not available

**Flammability (solid, gas):** Not available

**Partition coefficient: n-octanol water:** Not available

**Autoignition Temperature:** Not available

**Decomposition Temperature:** Not available

**Viscosity:** Not available

**Specific Gravity/Density:** Not available

### Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Incompatible products, excess heat, and combustible material. Direct sunlight.

**Incompatibilities with Other Materials:** Strong oxidizing agents, strong reducing agents, bases, acids, organic/combustible materials, metals.

**Hazardous Decomposition Products:** Phosphorus oxides, irritating and potentially hazardous fumes and gases.

Note: May attack metals producing extremely flammable hydrogen gas which can form explosive mixtures with air.

## Section 11 - Toxicological Information

### **CAS#51429-74-4 Phosphomolybdic Acid Hydrate:**

LD50 Oral: Not available

LD50 Dermal: Not available

LC50 Inhalation: Not available

**Carcinogenicity:** Phosphomolybdic Acid Hydrate CAS#51429-74-4 is not listed by IARC, NTP, OSHA, or California Prop. 65. Phosphomolybdic Acid Hydrate is listed by ACGIH (A3, Animal Carcinogen).

### **CAS#12501-23-4 Phosphotungstic Acid Hydrate:**

LD50 Oral: 300-2000 mg/kg (rat)

LD50 Dermal: Not available

LC50 Inhalation: Not available

**Carcinogenicity:** Phosphotungstic Acid Hydrate CAS#12501-23-4 is not listed by IARC, NTP, ACGIH, OSHA, or California Prop. 65.

**Information on the likely routes of exposure:** Routes of entry anticipated: oral, dermal, inhalation, and eye.

**Epidemiology:** Not available.

**Teratogenicity:** Not available.

**Reproductive Effects:** Not available.

**Developmental Effects:** Not available.

**Neurotoxicity:** Not available.

**Mutagenicity:** Not available.

**Specific Target Organ Toxicity, Single Exposure:** Not available.

**Specific Target Organ Toxicity, Repeated Exposure:** Not available.

**Symptoms associated with exposure:** Ingestion may cause burns of the upper digestive and respiratory tract, burning, vomiting, diarrhea, nausea, fatigue, anemia. Inhalation may cause damage/irritation to the respiratory tract, cough, burning, shortness of breath, mucosal irritations, headache, dizziness. Eye contact may cause serious eye damage, redness, burning, watering, blurred vision, blindness. Skin contact may cause burns, redness, irritation. May have a toxic effect on liver and kidneys after high doses.

**The toxicological properties of this material have not been thoroughly investigated.**

## Section 12 - Ecological Information

**Ecotoxicity:** Do not release to the environment. Do not release to drains.

### **CAS#12501-23-4 Phosphotungstic Acid Hydrate:**

EC50, water flea: 70.8 mg/L 48h static (daphnia magna)

ErC50, algae: 7.8 mg/L 72h static (pseudokirchneriella subcapitata)(green algae)

EC50, bacteria: >1000 mg/L 3h static (activated sludge)

**Persistence and degradability:** No information available.

**Bio-accumulative potential:** No information available.

**Mobility:** Will likely be mobile in the environment due to its water solubility.

### Section 13 - Disposal Considerations

**DISPOSAL:** Dispose of in accordance with all federal, state, and local regulations.

### Section 14 – Transport Information

**DOT**

Proper shipping name: Corrosive Liquid, Acidic, Inorganic, N.O.S. (Phosphomolybdic Acid, Phosphotungstic Acid Solution)

UN3264

PG III

Hazard Class 8

### Section 15 - Regulatory Information

#### Canada Regulatory Information

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the SDS contains all the information required by the CPR.

### Section 16 - Additional Information

**SDS Creation Date:** 10/15/12

**Revision #1:** 8/19/13 CF

**Revision #2:** 10/24/17

**Revision #3:** 2-8-22

**Revision #4:** 2-1-24

**Revision #5:** 1-5-26

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