

Safety Data Sheet

Phosphomolybdic Acid-Phosphotungstic Acid Solution

Section 1 - Chemical Product and Company Identification

SDS Name: Phosphomolybdic Acid-Phosphotungstic Acid Solution

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. Seek 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. Seek medical attention.

Oral Exposure: If swallowed, seek 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/m3 TWA	1000 mg/m3 IDLH	5 mg/m3 TWA (vacated)
Phosphotungstic Acid Hydrate CAS#12501-23-4	3 mg/m3 TWA	5 mg/m3 TWA 10 mg/m3 STEL	5 mg/m3 TWA (vacated) 10 mg/m3 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

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