

Safety Data Sheet

Phosphotungstic Acid Hematoxylin

Section 1 - Chemical Product and Company Identification

SDS Name: Phosphotungstic Acid Hematoxylin

Catalog Numbers: SO-398, F-382-1, G-452-5, K-658-2

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

H361-Reproductive toxicity: 2

H373-Specific target organ toxicity, repeated exposure: 2

H402-Hazardous to the aquatic environment, acute hazard: 3

H412-Hazardous to the aquatic environment, long-term hazard: 3

2.1% of the mixture consists of ingredients of unknown acute dermal toxicity.

2.1% 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

H361-Suspected of damaging fertility or the unborn child

H373-May cause damage to organs through prolonged or repeated exposure (brain, liver, central nervous system)

H402-Harmful to aquatic life

H412-Harmful to aquatic life with long lasting effects

Precautionary Statements:

P201-Obtain special instructions before use.

P202-Do not handle until all safety precautions have been read and understood.

P260-Do not breathe dust/fume/gas/mist/vapours/spray.

P264-Wash thoroughly after handling.

P273-Avoid release to the environment.

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.

P308+P313-If exposed or concerned: Get medical advice/attention.

P310-Immediately call a Poison Center/doctor.

P314-Get medical advice/attention if you feel unwell.

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
12501-23-4	Phosphotungstic Acid Hydrate	2 w/v
517-28-2	Hematoxylin	0.1 w/v
7722-64-7	Potassium Permanganate	0.02 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. Obtain 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 immediate medical attention.

Oral Exposure: If swallowed, clean mouth with water and seek immediate medical advice. Do NOT induce vomiting.

Inhalation Exposure: If inhaled, remove to fresh air. If not breathing, give artificial respiration. Seek immediate medical attention.

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, or alcohol-resistant foam.

Hazardous Combustion Products: Carbon oxides, phosphorous oxides, potassium oxides, manganese/manganese oxides, irritating and toxic 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. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Store in a cool, dry, and well-ventilated area. Keep in a tightly closed and non-metal container. Light sensitive. Protect from direct sunlight. 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 chemical-resistant 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 - Final PELs
Phosphotungstic Acid Hydrate CAS#12501-23-4	3 mg/m ³ TWA	5 mg/m ³ TWA 10 mg/m ³ STEL	5 mg/m ³ TWA (vacated) 10 mg/m ³ STEL (vacated)
Hematoxylin CAS#517-28-2	Not listed	Not listed	Not listed
Potassium Permanganate CAS#7722-64-7	0.02 mg/m ³ TWA 0.1 mg/m ³ TWA	1 mg/m ³ TWA 3 mg/m ³ STEL 500 mg/m ³ IDLH	5 mg/m ³ Ceiling

OSHA Vacated PELs: Phosphotungstic Acid Hydrate: 5 mg/m³ TWA; 10 mg/m³ STEL
Potassium Permanganate: 5 mg/m³ Ceiling

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: Dark Purple

Odor: Odorless

Vapor Pressure: Not available

Odor Threshold: Not available

Vapor Density: Not available

pH: Approx. 1.7

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 in closed containers under normal storage and handling conditions. Light sensitive.

Conditions to Avoid: Incompatible materials, ignition sources, and excess heat. Avoid direct sunlight.

Incompatibilities with other materials: Strong oxidizing agents, strong bases, strong acids, strong reducing agents, and combustible material.

Hazardous Decomposition Products: Carbon oxides, phosphorous oxides, potassium oxides, manganese/manganese oxides, irritating and toxic fumes and gases.

Section 11 - Toxicological Information
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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.

CAS#517-28-2 Hematoxylin: RTECS#: MH7875000

LD50 Oral: >2000 mg/kg (rat)

LD50 Dermal: Not available

LC50 Inhalation: Not available

Carcinogenicity: Hematoxylin CAS#517-28-2 is not listed by IARC, NTP, ACGIH, OSHA, or California Prop. 65.

CAS#7722-64-7 Potassium Permanganate: RTECS#: SD6475000

LD50 Oral: 750 mg/kg (rat)

LD50 Dermal: >2000 mg/kg (rat)

LC50 Inhalation: Not available

Carcinogenicity: Potassium Permanganate CAS#7722-64-7 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: Suspected of damaging fertility and/or the unborn child.

Developmental Effects: Not available.

Neurotoxicity: Not available.

Mutagenicity: Not available.

Specific Target Organ Toxicity, Single Exposure: Not available.

Specific Target Organ Toxicity, Repeated Exposure: Brain, liver, central nervous system.

Symptoms associated with exposure: This material causes burns by all exposure routes. Corrosive material. Contact with eyes may cause serious eye damage including burns, corneal lesions, blindness, blurred vision, redness, pain, watering, and severe tissue burns. Ingestion may cause severe burns, swelling, stomach pains, nausea, vomiting, diarrhea, and severe damage to the delicate tissue and danger of perforation.

Overexposure may cause headache, coughing, nose/throat irritation, labored breathing. Repeated exposure may damage brain, liver, central nervous system.

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. Harmful to aquatic life with long lasting effects.

CAS#12501-23-4 Phosphotungstic Acid Hydrate:

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

EC50, algae: 7.8 mg/L 72h static (pseudokirchneriella subcapitata)(green algae)

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

CAS#517-28-2 Hematoxylin:

LC50, freshwater fish: >35 mg/L 96h (oncorhynchus mykiss)(rainbow trout)

EC50, freshwater algae: >100 mg/L 7days (lemna minor)

EC50, water flea: 29.7 mg/L 48h static (daphnia magna)

CAS#7722-64-7 Potassium Permanganate:

LC50, freshwater fish: 0.47 mg/L 96h semi-static (poecilia reticulata)(guppy)

EC50, freshwater algae: 0.41 mg/L 72h

EC50, water flea: 0.06 mg/L 48h semi-static (daphnia magna)

EC50, bacteria: 164 mg/L 180min static (activated sludge)

EC50, freshwater algae: 0.8 mg/L 72h static (desmodesmus subspicatus)(green algae)

Persistence and degradability: Not available.

Bio-accumulative potential: Not 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 (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: 11-3-14

Revision #2: 9-16-19

Revision #3: 11-2-23

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