Section 1: Product and Company Identification
Product Name: Phosphotungstic Acid, Reagent (PTA)
Synonym: Tungstophosphoric acid
Company Name
Ted Pella, Inc., P.O. Box 492477, Redding, CA 96049-2477
  Inside USA and Canada 1-800-237-3526 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)
  Outside USA and Canada 1-530-243-2200 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)
CHEMTREC USA and Canada Emergency Contact Number 1-800-424-9300 24 hours a day
CHEMTREC Outside USA and Canada Emergency Contact Number +1-703-741-5970 24 hours a day

Section 2: Hazard Identification
2.1 Classification of the substance or mixture

GHS Pictograms

GHS05

2.2 Label elements

Hazard pictograms

GHS05

Signal Word: DANGER

Hazard statements:
H302 + H312 + H332  Harmful if swallowed, in contact with skin or if inhaled.
H314  Causes severe skin burns and eye damage.

Precautionary statements:
P260  Do not breathe dust, fume, gas, mist, vapors, or spray.
P264  Wash thoroughly after handling
P270  Do not eat, drink or smoke when using this product.
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): Remove and take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351 + P338  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.


2.3 Other hazards

Health Effects:
NFPA Hazard Rating: Health: 2; Fire: 0; Reactivity: 0
HMIS® Hazard Rating: Health: 2; Fire: 0; Reactivity: 0
(0=least, 1=Slight, 2=Moderate, 3=High, 4=Extreme)

Results of PBT and vPvB assessment:
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.
PBT: ND
vPvB: ND

Emergency overview
Appearance: Slightly efflorescent crystals or crystalline powder. White to slightly yellow-green.
Immediate effects: Burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting.

Potential health effects
Primary Routes of entry: Ingestion, inhalation, eye and skin contact.
Signs and Symptoms of Overexposure: ND
Eyes: Serious eye damage.
Skin: Skin corrosion.
Ingestion: Ingestion may cause burns to the gastrointestinal system
Inhalation: Cough, Shortness of breath, Headache, Nausea, Vomiting
Chronic Exposure: ND
Chemical Listed As Carcinogen Or Potential Carcinogen: None Listed.
See Toxicological Information (Section11)

Potential environmental effects
See Ecological Information (Section 12)

Section 3: Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Principle Hazardous Component(s) (chemical and common name(s)) (Cas. No)</th>
<th>%</th>
<th>OSHA PEL mg/m³</th>
<th>ACGIH TLV mg/m³</th>
<th>NTP Carcinogen</th>
<th>IARC Carcinogen</th>
<th>OSHA regulated Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphotungstic acid, hydrate 12067-99-1 EC No. 215-682-7</td>
<td>~100</td>
<td>ND</td>
<td>1 mg(W)* TWA</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

*Listed as Tungsten soluble compounds
Synonyms: Tungstophosphoric acid
Formula: $12\text{W}O_3\cdot\text{H}_3\text{PO}_4\cdot x\text{H}_2\text{O}$

Section 4: First Aid Measures

If accidental overexposure is suspected
Eye(s) Contact: Rinse opened eye for at least 15 minutes under running water. Assure adequate flushing by separating the eyelids with fingers. Seek immediate medical advice.
Skin Contact: Instantly wash with water and soap and rinse thoroughly. Seek immediate medical advice.
Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek immediate medical advice.
Ingestion: Seek immediate medical treatment.

Note to physician
Treatment: The following conditions may occur: Burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. Ingestion may cause burns to the gastrointestinal system.
Medical Conditions generally Aggravated by Exposure: ND

Section 5: Fire Fighting Measures
Flash Point: NA
Flammable Limits: Non-flammable.
Auto-ignition point: ND
Fire Extinguishing Media: Use extinguishing media most suitable to surrounding fire conditions.
Special Fire Fighting Procedures: Wear self-contained breathing apparatus. Wear fully protective fire-fighting equipment/clothing in fire situations.
Unusual Fire and Explosion Hazards: Product does not present an explosion hazard. Non-flammable.
Hazardous combustion products: Oxides of phosphorus and tungsten.
DOT Class: Corrosive.

Section 6: Accidental Release Measures
Steps to be Taken in Case Material is Released or Spilled:
Person-related safety precautions: Wear personal protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.
Measures for environmental protection: Do not allow material to be released to the environment without proper governmental permits.
Measures for cleaning/collecting: Dispose of contaminated material as waste.
Additional information: Ventilate and wash spill site after material removal is complete.
Waste Disposal Methods: Dispose of waste according to Federal, State and Local Regulations.

Section 7: Handling and Storage
Precautions to be taken in Handling and Storage: Keep containers tightly sealed. Ensure good ventilation/exhaust at the workplace. Store away from air, water and moisture.
Do not store together with bases or oxidizing agents. Best stored under dry inert gas.
Storage temperature: Store in cool, dry conditions.
Storage Pressure: NA

Section 8: Exposure Controls / Personal Protection
General Note: The usual precautionary measures should be adhered to in handling the chemicals. Keep away from foodstuffs, beverages and food. Instantly remove any soiled and impregnated garments. Wash hands during breaks and at the end of the work. Avoid contact with the eyes and skin.

Engineering Controls
Ventilation required: Use a chemical fume hood.

Personal Protection Equipment
General protective and hygienic measures: Keep away from foodstuffs and beverages. Instantly remove any soiled and impregnated garments. Wash hands during breaks and at the end of work. Avoid contact with eyes and skin.
Respiratory protection: Use suitable respirator when high concentrations are present. Use only NIOSH/IMESA or CEN approved dust mask type N95 or TYPE P1 (EN 143)
Protective gloves: Impervious gloves.
Skin protection: Protective work clothing sufficient to prevent contact.
Eye protection: Chemical safety goggles or full face protection as required.
Additional clothing and/or equipment: Emergency eyewash and safety shower.

**Exposure Guidelines**
See Composition/Information on Ingredients (Section 3)

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**Section 9 Physical and Chemical Properties**
Appearance and Physical State: Slightly efflorescent crystals or crystalline powder. White to slightly yellow-green color.
Odor (threshold): Odorless (ND)
Specific Gravity (H2O=1): ND
Vapor Pressure (mm Hg): ND
Vapor Density (air=1): ND
Percent Volatile by volume: ND

Evaporation Rate (butyl acetate=1): ND
Boiling point: ND
Melting point: 95 °C (203 °F)
pH: < 4 (5% solution)
Solubility in Water: Soluble
Molecular Weight: ND

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**Section 10: Stability and Reactivity**
Stability: No decomposition if used and stored according to specifications.
Conditions to Avoid: Keep tightly sealed, avoid moisture.
Materials to Avoid (Incompatibility): Bases, water, moisture and oxidizing agents.
Hazardous Decomposition Products: Oxides of phosphorus and tungsten.
Hazardous Polymerization: Will not occur.
Dangerous reactions: No dangerous reactions known.

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**Section 11: Toxicological Information**
Results of component toxicity test performed:
Acute toxicity: LD50/LC5O values relevant for classification:
   Oral-rat LD50: 3300 mg/kg
Primary Irritant effect:
   On the skin: Causes severe skin burns.
   On the eye: Causes serious eye damage.
Sensitization: No sensitizing effect known.
Human experience: ND
Additional toxicological information: Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
This product **does not** contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.

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**Section 12: Ecological Information**
Aquatic toxicity: ND
Persistence and degradability: ND
Behavior in environmental systems: ND
Bioaccumulative potential: ND
Mobility in soil: ND
Additional ecological information: Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Chemical Fate Information: ND
Section 13 Disposal Considerations
RCRA 40 CFR 261 Classification: ND
Recommendation: Allow professional disposal company to handle waste. Must be specially treated under adherence to official regulations.
Federal, State and local laws governing disposal of materials can differ. Ensure proper disposal compliance with proper authorities before disposal.

Section 14: Transportation Information
US DOT Information: Proper shipping name: Corrosive solid, acidic, inorganic, n.o.s. (Phosphotungstic acid)
Hazard Class: 8
Packaging group: III
UN Number: UN3260
IATA: Proper shipping name: Corrosive solid, acidic, inorganic, n.o.s. (Phosphotungstic acid)
Hazard Class: 8
Packaging group: III
UN Number: UN3260
IMO: ND
Marine Pollutant: No
Canadian TDG: Corrosive solid, acidic, inorganic, n.o.s. (Phosphotungstic acid)

Section 15: Regulatory Information
United States Federal Regulations
SARA: SARA 311/312 Hazards: Acute Health Hazard.
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302:
This material does not contain any chemical components with known CAS numbers that exceed the threshold (de minimis) reporting levels established by SARA Title III, Section 313.
RCRA: ND
TSCA: All components of this product are listed.
CERCLA: No

State Regulations
California Proposition 65: Not listed.
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

International Regulations
Canada WHMIS: All components of this product are listed on the Canadian Domestic Substances List (DSL)
Europe EINECS Numbers: 215-682-7

Section 16: Other Information
Label Information: Corrosive
European Risk and Safety Phrases: ND
European symbols needed: ND
Canadian WHMIS Symbols: ND

Abbreviations used in this document
NE= Not established
NA= Not applicable
NIF= No Information Found
ND= No Data
**Disclaimer**

Ted Pella, Inc. makes no warranty of any kind regarding the information furnished herein. Users should independently determine the suitability and completeness of information from all sources. While this data is presented in good faith and believed to be accurate, it should be considered only as a supplement to other information gathered by the user. It is the User's responsibility to assure the proper use and disposal of these materials as well as the safety and health of all personnel who may work with or otherwise come in contact with these materials.

SDS Form 0013F1V4