

Material Safety Data Sheet

Section 1: Identification

Names: Phosphotungstic Acid
Synonyms: Tungstophosphoric Acid
Company: QuantomiX Ltd.
12 Hamada St.
Tamar Science Park
Rehovot, Israel

Section 2: Composition/Information on Ingredients

Appearance: Solid, yellow powder

Ingredients	CAS Number	Weight
Phosphotungstic Acid	12501-23-4	100%

Formula: $(P_2O_5 \cdot 24WO_3 \cdot xH_2O)$

Section 3: Hazards Identification

Inhalation:

Inhalation of dust causes a mild, acidic, irritant action which can be relieved by coughing or sneezing. Heavy exposure to the dust of soluble tungsten compounds produces changes in body weight, behavior, blood cells, cholinesterase activity and sperm in experimental animals.

Ingestion:

Phosphotungstic acid is not especially toxic but it can act as an irritant to the gastrointestinal tract. Abdominal pain, vomiting or diarrhea may follow large ingestions. Ingestion of large amounts of soluble tungsten compounds produces changes in body weight, behavior, blood cells, cholinesterase, activity and sperm in experimental animals.

Skin Contact:

Causes skin irritation. Solutions are possibly corrosive.

Eye Contact:

Acidic irritant, possibly also abrasive.

Chronic Exposure:

No information found.

Repeated or prolonged exposure to the substance can produce target organs damage.

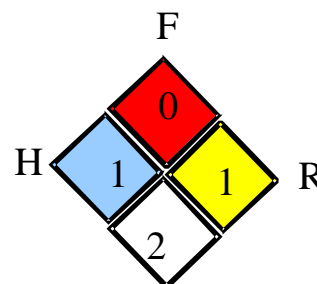
Section 4: First Aid Measures

Eye contact:

Check for and remove any contact lenses. DO NOT use an eye ointment. Seek medical attention.

Skin contact:

If the chemical got onto the clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical touches the victim's exposed skin, such as the hands: Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.





Serious skin contact: Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation: Allow the victim to rest in a well ventilated area. Seek medical attention.

Ingestion: Remove dentures if any. Have conscious person drink several glasses of water or milk. INDUCE VOMITING by sticking finger in throat. Lower the head so that the vomit will not reenter the mouth and throat. NEVER give an unconscious person anything to ingest. Seek medical attention.

Section 5: Fire-Fighting Measures

Fire hazard: Not considered to be a fire hazard.

Explosion: Not considered to be an explosion hazard.

Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire.

Special fire fighting procedures: In the event of a fire, wear full protective clothing and self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Section 6: Accidental Release Measures

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Section 7: Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

Do not ingest. Do not breath dust. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

Section 8: Exposure Control and Personal Protection

Exposure limits:

TWA: 1 CEIL: 3 (mg/m³)

Consult local authorities for acceptable exposure limits.

Engineering controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal protection:

Splash goggles. Laboratory coat. Dust respirator. Gloves (impervious). Wear appropriate respirator when ventilation is inadequate.

Personal protection in case of a large spill:

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.



Section 9: Physical and Chemical Properties:

Appearance: Small, colorless to gray, or slightly yellow-green crystals.

Odor: Odorless.

Solubility: 200 g/100 g water.

Density: No information found.

pH: No information found.

% Volatiles by volume @ 21C (70F): 0

Boiling Point: Not applicable.

Melting Point: 89C (192F) For 24 H₂O Hydrate

Vapor Density (Air=1): No information found.

Vapor Pressure (mm Hg): No information found.

Evaporation Rate (BuAc=1): No information found.

Section 10: Stability and Reactivity

Stability The product is stable.

Conditions of instability: No additional information.

Incompatibilities with various substances: No specific information is available.

Corrosivity: Non corrosive in presence of glass.

Polymerization: No.

Section 11: Toxicological Information

Toxicity to animals:

Oral Rat LD₅₀: 3300 mg/kg.

LC₅₀: Not available.

Chronic effect on humans: The substance is toxic to lungs, mucous membranes.

Toxicity of the product to the reproductive system: Not available.

Other toxic effects on humans: Slightly dangerous to dangerous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

Carcinogenicity: The substance is not listed in the IARC list of carcinogens

Section 12: Ecological Information

Ecotoxicity Not available.

BOD₅ and COD: Not available.

Products of biodegradation: Some metallic oxides.

Toxicity of the products of biodegradations: The products of degradation are more toxic.

Section 13: Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

Section 14: Transport Information

DOT Classification: DOT CLASS 8: Corrosive solid.

Identification: Corrosive solid, n.o.s. (Phosphotungstic acid)

UN1759 III

Special provisions for transport: No additional comments.



Section 15: Regulatory Information

Refer to local regulations.

Section 16: Other Information

No other information.

Date of issue: August 7, 2005

The above information is based on the present state of our knowledge. It is believed to be correct but is not necessarily all-inclusive and shall be used only as a guide. QuantomiX Ltd. shall not be held liable for any damage resulting from handling or from contact with the above product. The above information does not represent any guarantee of the properties of the product.