

## Technical Data Sheet (TDS)

**Product Name:** Phosphotungstic Acid Hydrate

**Synonym:** Tungstophosphoric Acid

**Catalogue Number:** ASD-620

**HS Code:** 2811.19.90

### 1. Chemical Identification

<b>CAS Number</b>	<b>12501-23-4</b>
<b>Molecular Formula</b>	$H_3[P(W_3O_{10})_4] \cdot xH_2O$
<b>Molecular Weight</b>	~2880.20 g/mol (hydration dependent)
<b>Appearance</b>	White to pale yellow crystalline powder
<b>Solubility</b>	Soluble in water and polar solvents
<b>Grade</b>	Laboratory / Analytical Grade

### 2. Product Description

Phosphotungstic Acid Hydrate is a heteropoly acid widely used in electron microscopy, histology, analytical chemistry, catalysis, and materials science. Its strong acidity and high electron density make it ideal for staining, precipitation reactions, and catalytic applications.

### 3. Typical Applications

1. Negative staining in transmission electron microscopy (TEM)
2. Histological staining (e.g., Masson's Trichrome)
3. Precipitation reagent for alkaloids and proteins
4. Heteropoly acid catalyst in organic synthesis
5. Nanomaterial and tungsten oxide synthesis

### 4. Physical & Chemical Properties

**Acidity:** Strong inorganic heteropoly acid

**Stability:** Stable under recommended storage conditions

**Moisture Sensitivity:** Hygroscopic; protect from moisture

### 5. Storage Conditions

Store at 15–25°C in a cool, dry place.

Keep container tightly sealed.

Protect from moisture and direct light exposure.

### 6. Quality Assurance

Manufactured under controlled production conditions.

Batch-specific Certificate of Analysis (COA) available.

Safety Data Sheet (SDS) available upon request.