



## MATERIAL SAFETY DATA SHEET (MSDS)

### MSDS for Tungstic acid

#### MATERIAL IDENTIFICATION

Product Name: Tungstic Acid

Chemical Formula: H<sub>2</sub>WO<sub>4</sub>

Molecular Weight: 249.86

CAS Number: 11105-11-6

RTECS Number: YO7840000

HS Code: 28259011.00

Appearance: Yellow Powder

Main Application: producing tungsten powder, using for dye, fire-proof materials and co-solvent ect..

#### Chemical and Physical Property

Boiling Point: 1473 ° C, lose 1 molecule of water when heated to 100 ° C and converted into tungsten anhydride (Tungsten Trioxide).

Solubility: insoluble in water

#### Combustion and Explosion Hazard

Flammability: Noncombustible

Hazardous characteristics: Can not be compatible with strong oxidants, bromine pentafluoride, iodine pentafluoride, fluorine and chlorine compounds. Also not compatible with sulfuric acid, etchant, ammonia, aliphatic amine, alkanolamine, aromatic amine, amino compound, organic acid anhydride, isocyanate, vinyl acetate, alkenyl oxide and epichlorohydrin.

Combustion (Decomposition) Products: Including toxic tungsten smoke.

Inhibitors: Sulfuric acid, etchants, ammonia, fatty amines, alkanolamines, aromatic amines, amino compounds, organic anhydrides, isocyanates, vinylacetates, alkenyl oxides, epichlorohydrin

#### Extinguishing Methods:

If the substance or the contaminated fluid is entering the waterway, be sure the downstream users of potential water contamination, local health, fire officials and pollution control authorities are informed. Use a fire extinguishing agent suitable for any fire. Use anyone fire extinguishing agent which is suitable for scene of fire to put out the fire. Use the fog water to cool container which is exposed.

#### Packaging and Storage

#### Storage and Transportation Note:

#### Toxicity Hazard

#### Exposure Limits:

ACGIH: (TWA) 1mg/m<sup>3</sup>, (STEL) 3 mg / m<sup>3</sup> (Calculated by tungsten-soluble compound)

NIOSH: (TWA) 1mg/m<sup>3</sup>, (STEL) 3mg/m<sup>3</sup> (Calculated by tungsten-soluble compound)



OSHA: NA

Intrusive Way

Toxicity:

Health Hazards: Irritation of the eyes, skin and respiratory tract, prolonged or repeated inhalation of dust can cause delayed pulmonary edema for several hours, serious cases of death.

First Aid

Skin Contact: Remove and isolate contaminated clothing and shoes. Wash skin with soap and water. Keep the patient warm and be quiet.

Eye Contact: If skin or eye contact with this substance, immediately rinse with water for at least 20 minutes.

Inhalation: Remove victim to somewhere with fresh air and go to a doctor. If the patient stops breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion: Inhalation, ingestion or skin contact with this substance may cause delayed reaction. To ensure that medical personnel to understand the material related to individual protection knowledge, pay attention to self-protection.

Protective Measures:

Respiratory Protection:

According to tungsten soluble compounds

- 1) 10mg / m<sup>3</sup>: High-performance filter layer of particulate respirator, air respirator.
- 2) 25mg / m<sup>3</sup>: Continuous-supply respirator.
- 3) 50mg / m<sup>3</sup>: High-performance filter layer full face mask respirator, self-contained breathing apparatus, full facepiece respirator.
- 4) Emergency or planned entry into areas of unknown concentration, or in immediate life-threatening or health-threatening conditions: self-contained positive-pressure full-face respirator, supplied-air positive-pressure full facepiece respirator assisted by self-contained positive pressure respirator.
- 5) Escape: Efficient filter layer full face mask respirator, self-contained escape breathing apparatus.