

# Ammonium Paratungstate Technical Information Bulletin

Powders That Shape Your World



Ammonium Paratungstate is a white, finely divided, crystalline material. It is produced by evaporation of purified ammonium tungstate solution to obtain pure paratungstate crystals. Controls of time, temperature, concentration, and pH, determine the quality and physical characteristics of the ammonium paratungstate crystals.

Scheelite Ore



Pressing

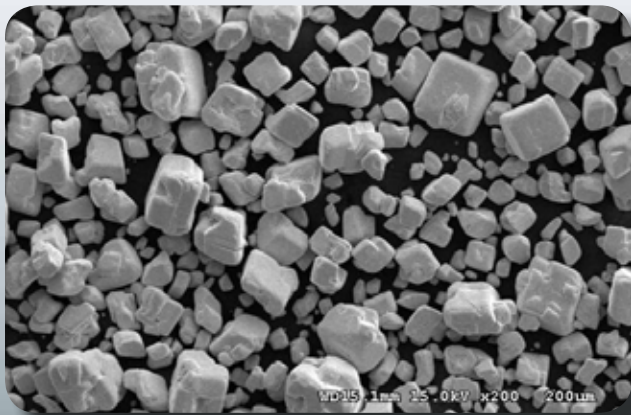


Beginning with various ore and scrap and passing through an expansive chemical process, GTP manufactures APT which is used to produce various tungsten materials including tungsten trioxide, tungsten blue oxide and tungsten powders & carbides. Those powders are then used to make numerous products including wire, cutting tools, billets, welding electrodes, mining tools and many others.



Chemical Processing

Tungsten Oxides and Powders



Ammonium Paratungstate

#### Formula

- $(\text{NH}_4)_{10}[\text{H}_2\text{W}_{12}\text{O}_{42}]4\text{H}_2\text{O}$

#### Molecular Weight

- 3133 g/mol

#### Applications:

- GTP Ammonium Paratungstate is used as a source for high-purity tungsten oxides, tungsten metal powders, carbides, or as a laboratory reagent. Other applications are in the fields of absorbent gels, coloring agent in the porcelain industry, and the catalyst industry.

### Physical Properties:

Appearance: White Crystals

Approximate Scott Density: 33-55 g/in<sup>3</sup>

Sieve Analysis: 100% will pass through U.S. standard 40-mesh screen. Minimum of 70% will pass through U.S. standard 100-mesh screen.

Typical Sieve Analysis:	
U.S. Sieve Size	Mass Percent
-40 mesh	100
-60 mesh	99
-100 mesh	85
-200 mesh	40
-325 mesh	20

### Impurity Content (ppm):

Element	Carbide Grade	Wire Grade
Al	2	2
Cu	1	0.3
Fe	3	2
Mo	6	2
Si	4	1
Na	2	2
Ca	2	1
As	-	2
K	-	1
Sn	-	1
P	-	2

### Chemical Composition:

	Theoretical	Spec	Typical
WO <sub>3</sub> %	88.8	87.0 min.	89.5
Ignition Loss at 750°C in air (%)	11.2	13.0 max.	10.5

Ammonium Paratungstate decomposes above 300°C to form tungsten oxides.

### Customization

Customization and impurity levels can be discussed at time of inquiry.

### Availability

GTP APT is available in blended lots up to 13,000 pounds (5,897 kgs).

### Packaging

Standard packaging is 325 pounds (147 kgs) of APT in polyethylene bags inside 15 gallon (57 liter) leverpacks. We can also deliver APT in 3,000 pound (1,361 kg) super sacks.



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### History of Global Tungsten & Powders:

For over 60 years, GTP in Towanda has been producing tungsten, molybdenum, cobalt, and tantalum based powder products. GTP produces a wide range of materials, which are used in the manufacture of numerous products. These products include metal working tools for cutting, rolling, and stamping; high temperature jet engine components and protective coatings; circuit manufacturing chemicals for microelectronics; catalysts for petrochemical processing.

The information and recommendations contained in this publication are based upon data collected by Global Tungsten & Powders Corp. and believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein, Global Tungsten & Powders Corp. assumes no responsibility for the results of the use of products and processes described herein. No statements or recommendations made herein are to be construed as inducements to infringe any relevant patent, now or hereafter in existence.