

# Ammonium Metatungstate

## Technical Information Bulletin

Powders That Shape Your World

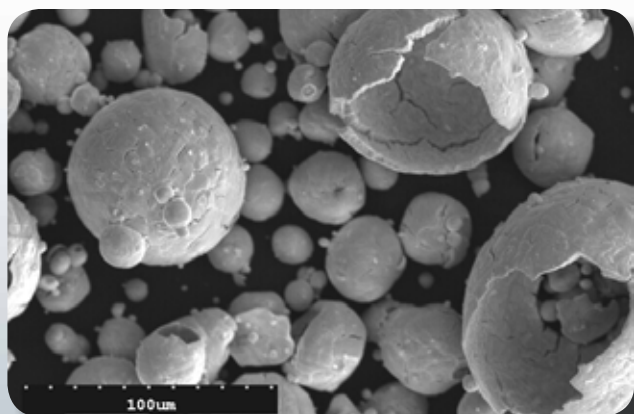


Ammonium metatungstate, also known as AMT, is a tungsten chemical in the form of highly soluble hydrated crystals. Global Tungsten & Powders AMT is produced as minus 10-mesh powder to meet stringent demands in the catalyst, medical, semiconductor and other high-technology industries. GTP AMT is also used in materials research and in analytical chemistry. At room temperature, aqueous solutions can be saturated up to 70% by weight of contained  $WO_3$ . This equates to 1.6 kilograms per liter or 13.3 pounds per gallon.

Chemical Composition:	Typical
$WO_3$ (%)	92.5
Ignition Loss at 500°C in air (maximum %)	7.5
Crystal Water: n of moles	3.0
pH of aqueous solution	3.0

### Impurity Content (Maximum ppm):

Element	PPM
Al	10
Ca	10
Cu	3
Fe	10
Mg	5
Mo	10
Na	20
Si	20
S	3
Heavy metals (Pb et al.)	10
Nonvolatile material (Ca, Na, K, Si)	100
Insoluble matter	150



Ammonium Metatungstate

### Formula



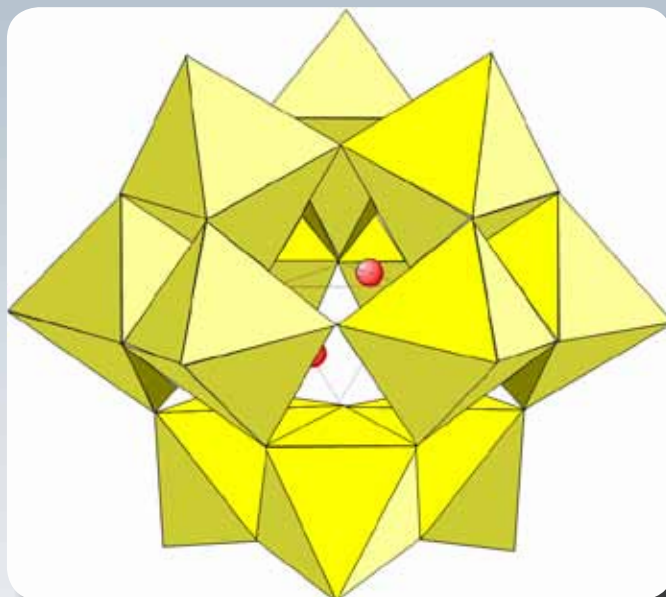
### Molecular Weight

- 3011 g/mol

### Applications:

Global Tungsten & Powders Corp. AMT is a source of high-purity, water-soluble tungsten which is essentially free of alkali and other metallic impurities. It is mainly used as a raw material for the production of tungsten catalysts for a variety of reactions including oxidation, hydroxylation, hydrogenation, and polymerization. Suitable carriers can be impregnated with alkali-free solutions of tungsten and processed to remove the water and ammonia. Such catalysts are used by the petrochemical industry.

Other applications include: reagents for chemical analysis such as for medical diagnosis; source material for the preparation of high-purity  $WO_3$  used as a thin-film substrate for certain semiconductor devices; high-purity source material for research in tungsten chemistry; source material for the DeNO<sub>x</sub> catalyst industry; as a precursor to a variety of POM (polyoxometalates).



Polyhedral Representation of the Metatungstate anion  $[H_2W_{12}O_{40}]^{6-}$

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### Customization

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

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### Availability

GTP AMT is available in blended lots up to 10,000 pounds (5,897 kgs).

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### Packaging

Standard packaging is 250 pounds (113 kilograms) of AMT in polyethylene bags inside 24 gallon (91 liter) leverpack drums.



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### History of Global Tungsten & Powders:

For over 70 years, GTP in Towanda has been producing tungsten, molybdenum, cobalt, and tantalum 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.