

Tungsten Powders for Drilling Applications

Technical Information Bulletin

Powders That Shape Your World



Global Tungsten & Powders manufactures a wide range of tungsten powders. GTP's powders are developed to provide high purity and particle size uniformity required by manufacturers of tungsten products and cemented tungsten carbide.

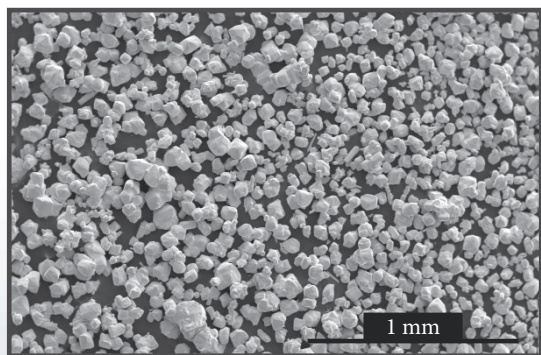
GTP has the capability to process several types of ore as well as secondary materials (scrap) to recover pure tungsten and remove unwanted impurities. GTP maintains a vertically integrated supply chain, sourcing raw material from numerous locations around the world (excluding China and conflict regions). Our raw material flexibility allows us to provide you with cost advantages and security of supply.

GTP's Tungsten Powders for Drilling Applications - shoulder, body and face powders - are designed specifically to provide high purity and particle size uniformity required by manufacturers of fixed cutter bits used in the oil and gas industry. Powders can be engineered to varying degrees of agglomeration in order to meet energy industry requirements including purity, flowability, and uniformity for easy infiltration and machining.

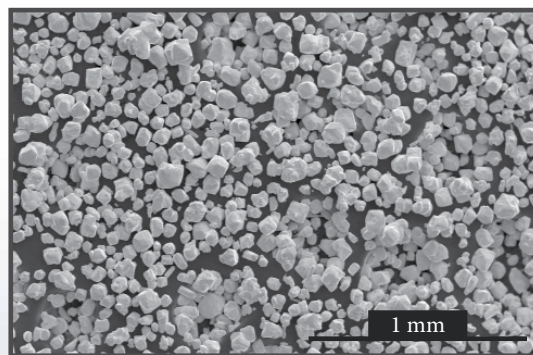
Our staff works with customers to develop specifications that meet their powder needs. Apparent density, particle size distribution and powder morphology are critical factors affecting powder performance. Statistical process control and state-of-the-art quality control facilities are utilized to ensure that powders comply with customer specifications.

Tungsten ore and scrap are digested and purified to produce ammonium paratungstate, which is calcined to oxide and then reduced in a hydrogen atmosphere to form the metal powder. The product is engineered and blended in quantities of up to 5,000 kilogram lots.

Shoulder Powder:



- Partially agglomerated tungsten powder
- Better flow, higher density, finer size distribution



- Deagglomerated tungsten powder
- Best flow, highest density, finest size distribution

Typical Physical Properties:

Measurement	Units	Shoulder
Apparent Density	g/cm ³	7.2 - 11.6
Hall Flow	s/50g	As low as 6
Body powder specs available upon request.		

Typical Chemical Properties:

LOR %	
Loss on Reduction (H ₂ O + O ₂)	0.10 Max
Purity: 99.95% Tungsten by difference	



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Customization

We will work with our customers to develop a qualified powder through a specification and sampling process. Samples will be provided to ensure material meets your specification.

Ordering

Standard body and shoulder powder types are available. For additional information, please contact GTP.

Certification

A certificate of analysis is provided for each lot and shipment.

Packaging



Material is packaged in aluminumized bags inside 3 1/2 gallon (13.2 liter) steel pails containing 50 pounds (22.68 kg). Alternative packaging and quantities can be discussed as required.

Contact Information

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History of Global Tungsten & Powders:

For over 60 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.