

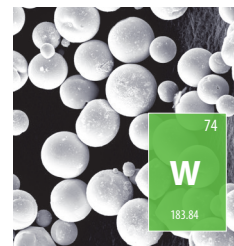
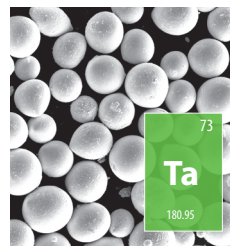
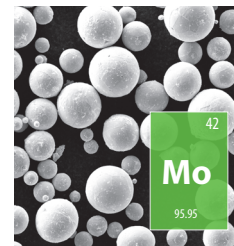
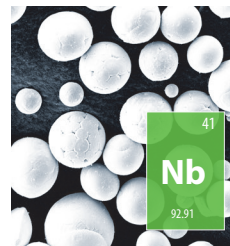
AM Powders

Refractory Alloy Powders for Additive Manufacturing

Matching the material properties with the AM methods needed to serve the markets

Based on 100 years of experience in manufacturing and development of refractory metals, H.C. Starck Solutions has powder and wire feedstock with tailored properties perfectly suited for Additive Manufacturing (AM). The company's core competencies of W, Mo, Ta, and Nb, in pure and alloyed forms, ensure materials with the highest quality and performance for our customers. With our unique understanding of refractory metals, we help our customers to select the correct material and AM method to best meet the requirements of their application.

As an integrated player, we use our feedstock materials and turn them into innovative finished products using the best suited additive manufacturing methods.



Tailored Solutions for Your AM Approach

H.C. Starck Solutions' AM powders are specifically designed to meet the demanding requirements of additive manufacturing technologies, with properties that have proven success

TYPICAL PROPERTIES OF AM POWDERS FOR PBF-L

Property	Unit	Niobium	Molybdenum	Tantalum	Tungsten
Purity	%	>99.95	>99.95	>99.95	>99.95
Mean Particle Size D50	µm	25-35	25-35	25-35	25-35
D10/D90*	µm	15/45	15/45	15/45	15/45
Bulk Density	g/cc	4	5	8	10
Hall Flow	s/50g	14-16	8-10	5-9	5-8
Oxygen	ppm	1500	400	300	250

*Other particle size ranges are available for AM methods such as DED or PBF-EB

H.C. Starck Solutions' innovative powder and wire manufacturing technology coupled with our vertically integrated supply chain and metallurgical expertise ensures the highest quality materials for demanding applications and environments. Our advanced technological processes enable us to customize our refractory metal feedstock to precise requirements achieving outstanding material properties and optimum performance for additive manufacturing.

Our Powder Advantage

- High purity
- High bulk density
- Spherical or flake powder morphology
- Exceptional flowability
- Low oxygen
- PSD optimized for specific printing methods
- Volumes from laboratory to production scale
- 100 years of refractory metal experience
- R&D capabilities to develop custom alloys

Our Customized Portfolio

- Tantalum Alloys: Ta-3W, Ta-10W
- Molybdenum Alloys: TZM, Mo-La, Mo-Re
- Tungsten Alloys: WHA, W-Re
- Niobium Alloys: Nb C-103

We continuously develop new materials and methods and are ready to support your unique requests

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