STANFORD
ADVANCED MATERIALS

Molybdenum

Powders, Alloys and Customized Machined & Fabricated Products

Meets or Exceeds ASTM Specifications
Economical and Competitive Alternative for Plansee and HC Starck

Standard Specification

- ASTM B386 Molybdenum and Molybdenum Alloy Plate, Sheet, Strip and Foil
- ASTM B387-Molybdenum and Molybdenum Alloy Bar, Rod and Wire

Molybdenum & Molybdenum Alloy

- Molybdenum 361-Unalloyed powder metallurgical molybdenum.
- Molybdenum Alloy 364-Powder metallurgical molybdenum-0.5 % titanium-0.1 % zirconium (TZM) alloy.
- ML (Molybdenum-Lanthanum Oxide) -lanthanum oxide 0.3 or 0.7 percent.

Benefits

99.95% molybdenum, TZM, ML alloy materials
Exceeds ASTM Standards

Pure Molybdenum

Shapes: Lump | Ingot | Foil | Strip | Sheet | Plate | Tube | Bar | Rod | Wire | Disc | Crucible | Fastener | Boat | Electrode | Flange | Mesh | Heat Shield | Powder

Materials: 99.95% Molybdenum, TZM, ML alloy

TZM

Shapes: Ingot | Foil | Strip | Sheet | Plate | Tube | Bar | Rod | Wire | Disc | Crucible | Fastener | Heat Shield

ML (Mo-La Alloy)

Shapes: Ingot | Foil | Strip | Sheet | Plate | Tube | Bar | Rod | Wire | Disc | Crucible | Fastener | Heat Shield

Properties of Molybdenum

Atomic number	42	CAS number	7439-98-7
Atomic mass	95.94	Melting point	2893K / 2620 °C
Boiling point	5833K / 5560 °C	Atomic volume	0.0153 [nm3]
Density at 20 °C	10.2 [g/cm3]	Crystal structure	body-centred cubic
Lattice constant	0.3147 [nm]	Abundance in the Earth's crust	1.2 [g/t]

Machined & Fabricated Molybdenum Products

Molybdenum Fabricated Products

Product	Description	Standard
Molybdenum Sheet / Molybdenum Foil	0.001" – 0.185" (0.03mm - 4.7mm) x W x L	ASTM B386
Molybdenum Foil / Molybdenum Strip	> 0.185" (4.7mm) x W x L	ASTM B386
Molybdenum Tube / Molybdenum Pipe	Inside Diameter (ID): < 5" (125mm) Wall Thickness (WT): > 0.2" (6mm) Maximum Length: < 120" (3000mm) Outside Diameter (OD): Tailor-made	ASTM B387
Molybdenum Bar / Molybdenum Rod	Diameter: > 0.157" (4.0mm) Dia. x L	ASTM B387
Molybdenum Wire	Diameter: 0.008" -0.157" (0.2mm - 4.0mm) x L	ASTM B387

Main Products and Applications

Targets	TFT-LCD, Thin Film Solar Cell, TP, Semiconductor, etc
Electrodes	Fiberglass, Aluminosilicate Fiber, Industrial Ceramic Fiber, Building Material etc.
Furnace Hot Zone	Sapphire Growth Furnaces, Atmosphere Furnaces, Vacuum Furnaces, etc.
Fabricated Parts	Semiconductor, Lighting Industries, etc
High-density Parts	Automobile, Aerospace Industries, etc

STANFORD ADVANCED MATERIALS

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