

Product: pure molybdenum

Manufacturing: Powder metallurgy (mixing, pressing, sintering), hammering/rolling/drawing, HT and machining.
Material properties are measured at room temperature on separate test samples.

1. Chemical Composition

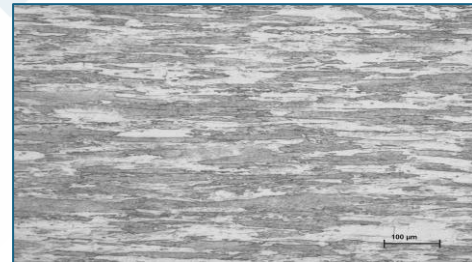
Element	Range (Min. – Max.)	Typical value
Molybdenum	99.95 – 99.98 %	99.96 %
All trace elements	0.02 – 0.05 %	0.04 %

2. Physical and Mechanical Properties

Property	Range (Min. – Max.)	Typical value
Density [g/cm ³]	10.15 – 10.28 (depending on the diameter)	10.28
Hardness [HV10]	200 – 250 (depending on diameter)	230
Tensile strength [MPa]	500 – 800 (depending on diameter)	700
Fracture elongation [%]	10 – 25 (depending on diameter)	20
Electrical conductivity at 300 K [S/m]	18.0 x 10 ⁶	18.0 x 10 ⁶
Electrical resistance at 300 K [μΩ m]	0.055	0.055
Thermal conductivity at 300 K [W/mK]	142	142
Coeff. of thermal expansion at 300 K [1/K]	5.2 x 10 ⁻⁶	5.2 x 10 ⁻⁶

3. Metallography

The microstructure consists of a completely fine-grained molybdenum matrix with uniform grain distribution. In the attached photo, it can be clearly seen that the molybdenum matrix is free of inclusions or foreign particles, highlighting the high quality of the material.



4. Applications

Heating elements and sintering boats for the furnace construction industry; Electrode material for resistance welding; Electrode material for die-sinking EDM; Electrode material for glass melting; Wires for surface finishing in the flame spraying process; retainer and core wires; rods, pins and components for incandescent and discharge lamps; Wires, sheets and components for a wide range of electrical applications.

5. Standards and Certificates

ASTM F289, ASTM, ASTM B387/B387M-23, and ASTM F364.

On customer request, we are happy to supply factory certificates according to EN 10204, optionally as test certificate 2.2 or 3.1.

6. Delivery program

Rods, rods, wires, sheets, electrodes, plates, strips and finished parts according to customer drawings