



Molybdenum364 Steel

Molybdenum364 steel is an alloy of 0.50% Titanium, 0.08% Zirconium and 0.02% Carbon with the balance Molybdenum. Molybdenum364 steel is manufactured by either P/M or Arc Cast technologies and is of great utility due to its high strength/high temperature applications, especially above 2000 ℉.

Molybdenum 364 steel has a higher recrystallization temperature, higher strength, hardness and good ductility at room and elevated temperatures than unalloyed Molybdenum. In addition, Molybdenum 364 steel exhibits good thermal conductivity, low vapor pressure, good corrosion resistance and is machinable.

Molybdenum364 Applications

Structural furnace components, die inserts for casting aluminum, hot stamping tooling, rocket nozzles, and electrodes.

Molybdenum364 Steel Material Properties

Density	10.21 g/cm ³ (637 lb/ft ³)
Elastic (Young's, Tensile) Modulus	330 GPa (48 x 10 ⁶ psi)
Elongation at Break	18 to 20 %
Specific Heat Capacity	250 J/kg-K
Strength to Weight Ratio	60 to 81 kN-m/kg
Tensile Strength: Ultimate (UTS)	610 to 830 MPa (88 to 120 x 10 ³ psi)
Tensile Strength: Yield (Proof)	400 to 720 MPa (58 to 104 x 10 ³ psi)
Thermal Expansion	19.8 μm/m-K

Molybdenum364 Alloy Steel Composition

Molybdenum (Mo)	99.2 to 99.5 %
Titanium (Ti)	0.40 to 0.55 %
Zirconium (Zr)	0.06 to 0.12 %
Carbon (C)	0.01 to 0.04 %
Oxygen (O)	0 to 0.03 %
Iron (Fe)	0 to 0.01 %
Nickel (Ni)	0 to 0.005 %
Silicon (Si)	0 to 0.005 %



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Nitrogen (N)0 to 0.002 %

Molybdenum364 steel Physical Properties

Density	lb/in ³	0.37
	gm/cm ³	10.22
Melting Point	℉	4753
	℃	2623
Thermal Conductivity	Cal/cm ² /cm ℃/sec	0.48
Specific Heat	Cal/gm/ ℃	0.073
Coefficient of Linear Thermal Expansion	micro-in/ ℉ x 10 ⁻⁶	2.50
	micro-in/ ℃ x 10 ⁻⁶	5.20
Electrical Resistivity	micro-ohm-cm	6.85

Molybdenum364 steel Mechanical Properties

Tensile Strength	KSI (Mpa)-RT	110 (760)
	KSI (Mpa)-500 ℃	--
	KSI (Mpa)-1000 ℃	--
Elongation	% in 1.0"	15
Hardness	DPH	220
Modules of Elasticity	KSI	46000
	Gpa	320

Shanghai Katalor Industry Co., Ltd stocks Molybdenum 364 steel in a variety of forms and dimensions. Shanghai Katalor Industry Co., Ltd supplies the highest quality special purpose metals and alloys for Aerospace/Aviation, Defense, Electronics, Magnetic, Medical, Lighting, Optical, Telecommunications, Ceramics, Heat Treating, and other high-technology industries.if you need Molybdenum364 steel, please give us a message.

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