

Molybdenum

Refractory Metals and Alloys

DESCRIPTION

Molybdenum is an excellent material due to its unique mechanical and chemical properties that can meet the most demanding application requirements in many diverse industries. Molybdenum is best categorized as a refractory metal due to its very high melting point, low coefficient of thermal expansion and a high level of thermal conductivity. The strength of molybdenum increases the more the metal is cold worked. Pure molybdenum is conducive to many applications in high-temperature furnace building because of its high availability, good workability and favorable high-temperature properties, such as low vapor pressure and high melting point.

APPLICATIONS

Structural furnace members, windings and components, containers for components exposed to high temperatures, nose cones, nozzles, support vanes, heat radiation shields, cathodes, magnetron end hats, x-ray tube components, high temperature applications.

PHYSICAL PROPERTIES

Density	lb/in ³	0.37
	gm/cm ³	10.20
Melting Point	°F	4748
	°C	2620
Electrical Resistivity	Micro-ohm-cm	5.34
Specific Heat @20°C	Cal/gm °C	0.061
Recrystallization Temp	°C	1100
Thermal Conductivity @20°C	W/m-K	142
Coefficient of Linear Thermal Expansion	Micro-in/ °F x 10 ⁻⁶	2.90
	Micro-in/ °C x 10 ⁻⁶	5.20

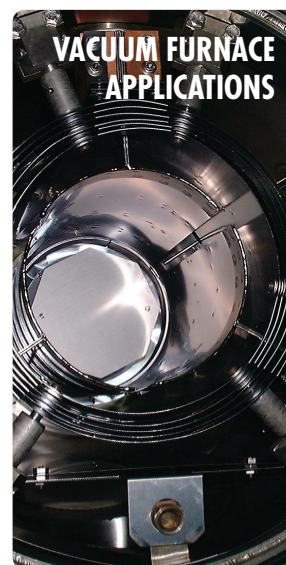
MECHANICAL PROPERTIES

Tensile Strength	KSI (MPa)-RT	150 (1034)
	KSI (MPa)-500 °C	75 (517)
	KSI (MPa)-1000 °C	25 (172)
Elongation	% in 1.0"	12
Typical Hardness	HV10	>220
Modulus of Elasticity @20°C	GPa	320

FORMS AVAILABLE

- Bar | Rod
- Plate
- Precision Cut Wire
- Sheet | Strip
- Spooled Wire
- Threaded Rods | Nuts

Please call us at 800-348-6268 with your form and size requirements.
No order is too small.



CHEMISTRY

Minimum % 99.97 Molybdenum (Mo)

SPECIFICATIONS

AMS 7800 ASTM: B386 Type 361, B387 Type 361

Controlled Expansion | Glass Sealing Electrical & Electronic Nickel

Ed Fagan Inc. supplies the highest quality metals and alloys including materials from Carpenter Technology Corp.

ASTM F15 Alloy

Forms: Coil/Strip, Plate, Round Bar, Sheet,
Wire, Wire Rod
Trade Names: Kovar®, Pernifer® 2918, NILO K®, DilverP1®

Alloy 42/46/48/52

Forms: Plate, Round Bar, Sheet
Trade Names: Pernifer®40, 46, 48, 50; NILO® 42, 46, 48, 50;
Glass Seal 42, 46, 48, 50

Invar 36®

Forms: Plate, Round Bar, Sheet, Wire, Wire Rod
Trade Names: Pernifer® 36, NILO® 36, Invar Steel

Super Invar 32-5®

Forms: Plate, Round Bar, Sheet

Electronic Nickel

200/201/233/270

Forms: Coil/Strip, Round Bar, Sheet, Wire, Wire Rod

Soft Magnetic Alloys | EMI Shielding & Laminations

Ed Fagan Inc. is an exclusive distributor of
"EMI shielding alloys" for VDM Metals GmbH,
the world's leading producer of these alloys.

EFI Alloy 50

Forms: Coil/Strip, Rectangular Bar, Wire
Trade Names: Alloy 47-50,
High Permeability 49®, Magnifer® 50

EFI Alloy 79

Forms: Coil/Strip, Rectangular Bar, Round Bar,
Sheet, Wire
Trade Names: Hipernom, HyMu80®,
Magnifer® 7904, Molypermalloy, Permalloy 80®

Carpenter Hipercor 50® and Hipercor® 50A

Forms: Coil/Strip, Plate, Round Bar

Carpenter VimVar Core Iron

Forms: Coil/Strip, Round Bar, Sheet

Refractory Metals and Alloys

Ed Fagan Inc. is your leading source for
quality refractory metals and alloys. We stock
molybdenum and its alloys in various forms and
sizes manufactured from Plansee Group.

Molybdenum

Forms: Bar/Rod, Plate, Precision Cut Wire, Sheet/
Strip, Spooled Wire, Threaded Rod/Nuts

Molybdenum Lanthanum Oxide (ML)

Forms: Bar/Rod, Plate, Precision Cut Wire, Sheet/
Strip, Spooled Wire

Molybdenum TZM

Forms: Bar/Rod, Plate, Sheet

Niobium

Forms: Coil/Strip, Plate, Round Bar, Sheet, Wire

Rhenium

Forms: Coil/Strip, Plate, Round Bar, Sheet

Tantalum

Forms: Coil/Strip, Plate, Round Bar, Sheet, Wire

Tungsten

Forms: Bar/Rod, Coil/Strip, Parts (To
Specification), Plate, Precision Cut Wire, Sheet

Tungsten Alloy

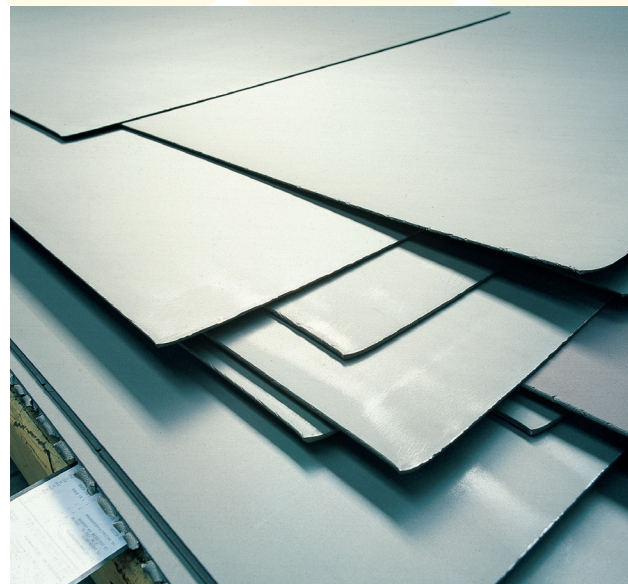
Blank Forms: Flats, Parts, Plate/Sheet, Round Bar, Shapes

Alloys and Metals We Distribute

High-Temperature Alloys • Titanium – CP, 6 Al-4V •
Corrosion Resistant Alloys • Stainless Steel

Ed Fagan Inc. Services

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Water Jet Cutting, Laser Cutting, Custom Stocking and
Consignment Programs



JUST-IN-TIME DELIVERY: All of our **standard stock** items can be
shipped within 24-hours of your order confirmation and most are **shipped the same day**.
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sales team for our competitive pricing and delivery lead times.

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