



ED FAGAN INC.

Molybdenum

Refractory Alloys



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DESCRIPTION

Molybdenum's unique properties give rise to processes and applications in electronics, aerospace, nuclear and metal working industries which would not be possible with many of the more common metals and alloys. Some of the more interesting properties of Molybdenum relate to high temperature applications - high temperature strength, excellent thermal properties, good electrical conductivity, low coefficient of expansion and low vapor pressure at elevated temperatures.

APPLICATIONS

In missile industry, nose cones, high temperature structural parts, nozzles, leading edges of control surfaces, support vanes, re-entry cones, heat radiation shields. In electronics, cathodes, magnetron end hats, x-ray tube components. In high temperature applications, furnace windings, structural furnace members, and containers for components exposed to high temperatures.

PHYSICAL PROPERTIES

Density	<i>lb/in³</i>	0.369
	<i>gm/cm³</i>	10.30
Melting Point	<i>°F</i>	4760
	<i>°C</i>	2625
Thermal Conductivity	<i>cal/cm²/cm²C/sec</i>	0.35
Specific Heat	<i>Cal/g-°C</i>	0.061
Coefficient of Linear Thermal Expansion	<i>micro-in/°F</i>	4.90
	<i>micro-in/°C</i>	2.70
Electrical Resistivity	<i>microhm-cm</i>	5.17
Recrystallization Temp.	<i>°C</i>	1100

MECHANICAL PROPERTIES

Tensile Strength	<i>KSI(Mpa)-RT</i>	150(1035)
	<i>KSI(Mpa)-500°C</i>	75(515)
	<i>KSI(Mpa)-1000°C</i>	25(175)
Elongation	<i>% in 1.0"</i>	-
Hardness	<i>DPH</i>	230
Modulus of Elasticity	<i>KSI</i>	45000
	<i>Gpa</i>	310

FORMS AVAILABLE

Rod: Clean & Straight	3.175mm - 50.80mm
Rod: Centerless Ground	1.016mm - 50.80mm
Sheet: Electronic Grade	0.254mm - 19.050mm
Sheet: Furnace Grade	0.254mm - 4.749mm
Plate	4.762mm - 25.40mm
Threaded Rod/Nuts	Various Sizes

SPECIFICATIONS

AMS 7800



CHEMISTRY - Minimum % 99.95



Ed Fagan Inc also specializes in locating exotic materials. So, if you can't locate that hard-to-find material you need... Put EFI's material locator service to work for you!

www.material-locator.com

**THE MATERIALS YOU NEED,
WHEN YOU NEED THEM**



www.edfagan.eu
sales@edfagan.eu
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Photo Courtesy of Thermal Technology, LLC.

Glass Sealing/ Controlled Expansion Alloys

EFI provides the highest quality materials including materials from Carpenter Technology Corp.

ASTM F15 Alloy:

aka Kovar & Pernifer 2918
Coil/Strip, Sheet, Plate,
Bar, Wire

Invar 36:

Bar, Sheet, Plate

42/46/48/52 Alloy:

Coil/Strip, Sheet, Plate, Bar

Electronic Nickel

200/201/233/270:

Coil/Strip, Rod, Sheet, Plate

Soft Magnetic Alloys/ EMI Shielding & Laminations

EFI is a distributor of magnetic shielding alloys for the world's leading producer of these alloys – ThyssenKrupp VDM.

EFI Alloy 79: aka Magnifer 7904,

Moly-Permalloy & HyMu 80
Sheet, Coil/Strip

EFI 50:

aka Magnifer 50 & High Perm 49
Bar, Coil/Strip

Carpenter VimVar Core Iron:

Rod, Bar

Carpenter Hiperco 50:

Coil/Strip, Billet

Radiometal 4550: Rod, Coil/Strip

Refractory Metals/Alloys

EFI is a stocking distributor of Molybdenum & Tungsten products, as well as many other refractory metals and alloys, providing the highest quality materials available.

Molybdenum:

Bar, Sheet, Plate, Coil/Strip

TZM Molybdenum Alloy:

Sheet, Bar

Tungsten:

Bar, Coil/Strip, Sheet

Tantalum: Sheet, Tubing

Niobium: Strip

Tungsten Alloy: Rod, Shapes

Rhenium: Sheet

Hard-to-Find Special Purpose Metals, Alloys and Materials

Are you spending too much of your valuable time trying to locate suppliers of specialty metals and materials? Use EFI's Material Locator (see below) to source it for you so you can get back to doing what you do best.

- Coil/Strip
- Sheet
- Plate
- Rod
- Tube
- Pipe
- Wire

JUST IN TIME DELIVERY

All standard stock items can be **shipped within 24 hours** – and are often **shipped the same day**. All materials are certified with shipment.

METALS WE DISTRIBUTE

Titanium
Zirconium

High Temperature Alloys
Corrosion Resistant Alloys
Stainless Steel

Copper – OFE, OFHC
Brass & Bronze
Beryllium Copper

SERVICES WE OFFER

Slitting, Shearing, Saw Cutting, Centerless Grinding, Water-jet Cutting, Laser Cutting,
Custom Stocking Programs • Consignment Programs



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