

**Mo**

95.95

Molybdenum

# Molybdenum

## Refractory Metals and Alloys

www.edfagan.com | sales@edfagan.com  
toll free 800.348.6268

### 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.

### TYPICAL PHYSICAL PROPERTIES

Density	lb/in <sup>3</sup>	0.37
	gm/cm <sup>3</sup>	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 <sup>-6</sup>	2.90
	Micro-in/ °C x 10 <sup>-6</sup>	5.20

### TYPICAL 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

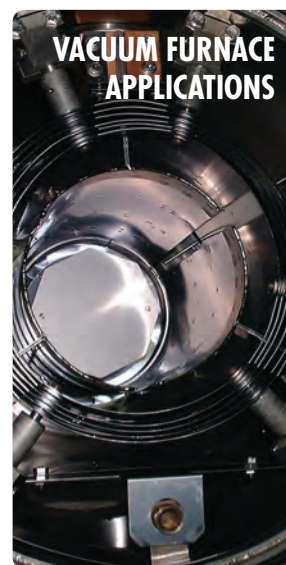
### FORMS AVAILABLE

- Plate •
- Precision Cut Wire •
- Round Bar | Rod •
- Sheet | Strip •
- Spoiled Wire •
- Threaded Rods | Nuts •

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



**HIGH TEMP  
APPLICATIONS**



**VACUUM FURNACE  
APPLICATIONS**

### CHEMISTRY %

99.97 Molybdenum (Mo) Minimum

### SPECIFICATIONS

ASTM: B386 Type 361, B387 Type 361, AMS 7800

769 Susquehanna Avenue, Franklin Lakes, NJ 07417  
PH: 201.891.4003 | Toll Free: 800.335.6827



10537 Humbolt Street, Los Alamitos, CA 90720  
PH: 562.431.2568 | Toll Free: 800.782.9657

# Special Purpose Alloys & Metals From Stock

**efi** ED FAGAN INC.  
Special Purpose Alloys

www.edfagan.com | sales@edfagan.com

## Controlled Expansion | Glass Sealing

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

### Kovar® | ASTM F15 Alloy

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

### Alloy 42/46/48/52

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

### Free-Cut Invar "36"® Alloy

Forms: Round Bar, Wire

### Invar "36"® Alloy

Forms: Plate, Sheet  
Trade Names: Pernifer® 36, NILO® 36, Invar

### Super Invar 32-5®

Forms: Plate, Round Bar, Sheet

## Refractory Metals and Alloys

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

### Molybdenum

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

### Molybdenum Lanthanum Oxide (ML)

Forms: Sheet – Stress Relieved, Recrystallized

### Molybdenum TZM

Forms: Plate, Round Bar

### Niobium

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

### Rhenium

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

### Tantalum

Forms: Round Bar, Sheet

### Tungsten

Forms: Parts (To Specification), Plate, Precision Cut Wire, Round Bar, Sheet

### Tungsten Alloy

Blank Forms: Flats, Parts, Plate/Sheet, Rod, Shapes

## Soft Magnetic Alloys | EMI Shielding & Laminations

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

### EFI Alloy 50

Forms: Round Bar, Square Bar, Strip/Coil, Wire  
Trade Names: Alloy 4750, High Permeability 49®, Magnifer® 50

### EFI Alloy 79

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

### Hiperco® 50, Hiperco® 50A, Hiperco® 50 HS

Forms: Plate, Round Bar, Strip/Coil

### Carpenter VimVar Core Iron

Forms: Plate, Round Bar

## Electrical & Electronic Nickels

Ed Fagan Inc. supplies select, commercially pure grades of Nickel in various forms and sizes.

### Electronic Nickels

200/201/205/233/270

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

## Alloys and Metals We Distribute

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

## Ed Fagan Inc. Services

Slitting, Shearing, Saw Cutting, Grinding, 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**. All materials certified with shipment. For special orders and non-stock materials, contact our sales team for our competitive pricing and delivery lead times.

769 Susquehanna Avenue, Franklin Lakes, NJ 07417  
PH: 201.891.4003 | Toll Free: 800.335.6827



10537 Humbolt Street, Los Alamitos, CA 90720  
PH: 562.431.2568 | Toll Free: 800.782.9657