



ED FAGAN INC.

Tungsten

Refractory Metals



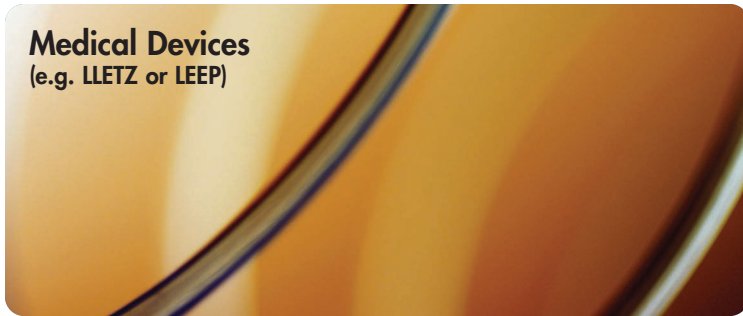
769 Susquehanna Avenue, Franklin Lakes, NJ 07417 • **phone 201.891.4003**
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DESCRIPTION

Many practical applications of tungsten are based on its high melting point and density and its low vapor pressure. Tungsten is an excellent material for high vacuum technology, medical applications, glass seals and furnace construction. In addition, tungsten's high density gives it a capacity to absorb radioactive radiation. Tungsten has found wide use as additives to steel to enhance physical properties and an alloy with nickel, copper and iron to provide high density machinable materials.

APPLICATIONS

High temperature furnace components; glass to metal seals; heavy metal alloys; medical devices; welding electrodes.



Medical Devices
(e.g. LLETZ or LEEP)

MECHANICAL PROPERTIES

Tensile Strength	KSI(Mpa)-RT	250(1725)
	KSI(Mpa)-500°C	150(1035)
	KSI(Mpa)-1000°C	75(515)
Elongation	% in 1.0"	-
Hardness	DPH	300
Modulus of Elasticity	KSI	58,000
	Gpa	400

PHYSICAL PROPERTIES

Density	lb/in³	0.70
	gm/cm³	19.27
Melting Point	°F	6192
	°C	3422
Thermal Conductivity	cal/cm²/cm°C/sec	0.48
Specific Heat	Cal/gm/°C	0.032
Coefficient of Linear Thermal Expansion	micro-in/°F x 10⁶	4.30
	micro-in/°C x 10⁶	2.40
Electrical Resistivity	micro-ohm-cm	5.50

FORMS AVAILABLE

Rod	0.035" - 2.00"
Sheet	0.005" - 0.187"
Plate	0.1875" - 1.00"
Precision Cut Wire*	0.001" - 0.125"

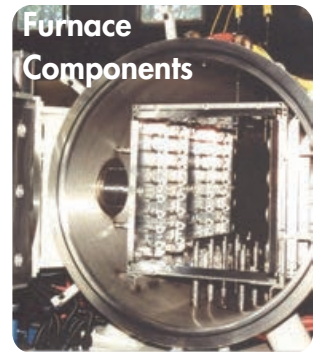
If you do not see the size or form you require listed above, please call us. We add new stock material frequently, and may have the size and form you need.

*Wire cut to length to your tolerance, concentricity, and straightness. Not a standard stock item. Please call for delivery options.

CHEMISTRY - Minimum % 99.95



Furnace Components



Furnace Components

SPECIFICATIONS

AMS 7898 / 7899



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**



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

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ED FAGAN INC.

Glass Sealing / Controlled Expansion Alloys / Electrical & Electronic Nickel

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

ASTM F15 Alloy:

aka Kovar, Pernifer 2918, NILO K & Dilvar P1

Coil/Strip, Sheet, Plate, Round Bar

Invar 36:

aka Pernifer 36, NILO 36 & Invar Steel

Round Bar, Sheet, Plate

Super Invar 32-5:

Round bar, Sheet, Plate

42/*46/48/52 Alloy:

aka Pernifer 40, 46, 48 & 50;

NILO 42, 46, 48 & 50;

Glass Seal 42, 46, 48 & 50

Coil/Strip, Sheet, Plate, Round Bar

Electronic Nickel

200/201/233/270:

Coil/Strip, Round Bar, Sheet

**Products listed in Italics are special order and not standard stock items. Please call for availability.*

Soft Magnetic Alloys/ EMI Shielding & Laminations

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

EFI Alloy 79:

aka Magnifer 7904, Moly-Permalloy,

HyMu 80, Hypernom & Permalloy 80

Round Bar, Sheet, Coil/Strip

EFI Alloy 50:

aka Magnifer 50, High Permeability 49 & Alloy 47-50

Round & Square Bar, Coil/Strip

Carpenter VimVar Core Iron:

Round Bar

Carpenter Hiperco 50:

Plate, Coil/Strip

Carpenter Hiperco 50A:

Round Bar

Radiometal 4550:

Round Bar, 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:

Round Bar, Sheet, Plate,

Threaded Rod & Nuts

**Foil/Coil/Strip, Wire*

TZM Molybdenum Alloy:

Round Bar, Sheet, Plate

Tungsten:

Round Bar, Plate, **Sheet, *Wire*

Tungsten Alloy:

Round Bar, **Sheet, *Plate,*

**Shapes, *Flat Blanks*

**Tantalum: Round Bar, Sheet*

**Niobium: Foil/Coil/Strip*

**Rhenium: Sheet*

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METALS WE DISTRIBUTE

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

JUST IN TIME DELIVERY: All **standard stock** items can be **shipped within 24 hours** – and are often **shipped the same day**. For **special order** materials, EFI has long relationships with the manufacturers of these materials, so please contact a sales rep to discuss price and delivery options. All materials can be certified with shipment.

SERVICES WE OFFER

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



Are you spending too much of your valuable time trying to locate specialty metals and materials? If you can't locate the hard-to-find materials you need, use EFI's Material Locator to source them for you.

www.material-locator.com

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



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