



ED FAGAN INC.

Tungsten

Refractory Alloys



Unit 3a South Hams Business Park, Churchstow, Kingsbridge, Devon, TQ7 3QH
phone +44 (0) 1548 858 770 • fax +44 (0) 1548 856 516

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, dimensional stability, 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.



Welding Electrodes

MECHANICAL PROPERTIES

<i>Tensile Strength</i>	<i>KSI(Mpa)-RT</i>	250(1725)
	<i>KSI(Mpa)-500°C</i>	150(1035)
	<i>KSI(Mpa)-1000°C</i>	75(515)
<i>Elongation</i>	<i>% in 1.0"</i>	-
<i>Hardness</i>	<i>DPH</i>	300
<i>Modulus of Elasticity</i>	<i>KSI</i>	58000
	<i>Gpa</i>	400

PHYSICAL PROPERTIES

<i>Density</i>	<i>lb/in³</i>	0.70
	<i>gm/cm³</i>	19.27
<i>Melting Point</i>	<i>°F</i>	6170
	<i>°C</i>	3410
<i>Thermal Conductivity</i>	<i>cal/cm²/cm°C/sec</i>	0.48
<i>Specific Heat</i>	<i>Cal/gm/°C</i>	0.032
<i>Coefficient of Linear Thermal Expansion</i>	<i>micro-in/°F x 10⁶</i>	4.30
	<i>micro-in/°C x 10⁶</i>	2.40
<i>Electrical Resistivity</i>	<i>micro-ohm-cm</i>	5.50

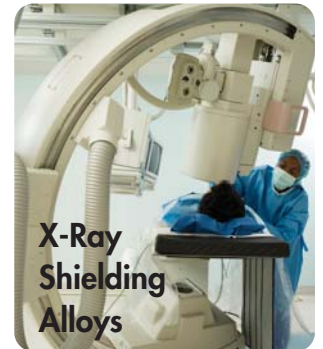
FORMS AVAILABLE

<i>Rod</i>	0.762mm - 9.525mm
<i>Sheet</i>	0.127mm - 1.524mm
<i>Plate</i>	6.350mm

CHEMISTRY - *Minimum %* 99.95



Vacuum Technology



X-Ray Shielding Alloys

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**



www.edfagan.eu
sales@edfagan.eu
+44 (0) 1548 858 770

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ED FAGAN INC.

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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