



ED FAGAN INC.

EFI Alloy 79

Soft Magnetic Alloys



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DESCRIPTION

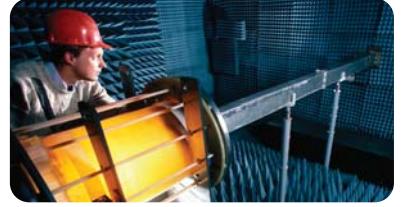
A soft magnetic alloy consisting of 80% Nickel, 5% Molybdenum, and balance Iron used where extremely high initial & maximum permeability and minimum hysteresis is needed.

APPLICATIONS

Electro-magnetic shielding, specialty transformer laminations, toroidal tape wound cores, high quality motor laminations, stepping motors.

AKA: Magnifer 7904², Carpenter HyMu 80¹, Hipernom¹, Moly-Permalloy, Permalloy 80

Footnotes: 1. Trademark Carpenter Technology Corp., Reading PA;
2. Trademark ThyssenKrupp-VDM, Germany



TYPICAL DC MAGNETIC PROPERTIES

Saturation Induction - Gauss	8,700
Maximum Permeability	230,000
Coercive Force - Oersteds	0.015
Coercive Force - A/m	1.19

TYPICAL AC MAGNETIC PROPERTIES

Core Loss W/lb @ 400Hz & 20k G	N/A
B-40 Permeability @ 60Hz	45,000

N/A = not a typical application value

PHYSICAL PROPERTIES

Density	lb/cu in	0.316
Specific Gravity		8.74
Curie Temp	°F	860
	°C	460
Melting Point	°F	2650
	°C	1454
Electrical Resistivity	micro-ohm-cm	59
	ohm-cir mil/ft	394
Thermal Conductivity	W/cm °C	0.35
	BTU-in/sq. ft-hr-°F	240
Specific Heat	Cal/g- °C	-
	BTU/lbm-°F	-
Thermal Expansion	ppm/°F(75°F to 842°F)	7.5
	ppm/°C(25°C to 450°C)	13.6

MECHANICAL PROPERTIES

Tensile Strength	ksi	98
	MPa	676
Yield Strength	ksi	38
	MPa	262
Elongation	% in 2 in.	40
Typical Hardness	Rockwell	HRB 85
Modulus of Elasticity	Mpsi	31.4
	kMPa	217

FORMS AVAILABLE

Rod	3.556mm - 41.275mm
Sheet	0.254mm - 3.175mm
Strip/Coil	0.101mm - 0.635mm

Strip/Coil can be slit to customer requirements down to 4mm widths

CHEMISTRY - maximum % unless noted

Iron	Bal.	Silicon	0.42
Nominal Nickel	80	Vanadium	-
Nominal Cobalt	-	Niobium	-
Molybdenum	5.0	Phosphorus	0.02
Carbon	0.03	Sulfur	0.008
Manganese	0.95		

SPECIFICATIONS

ASTM A753, MIL N-14411C



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
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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 Hipercro 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

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