



ED FAGAN INC.

Radiometal 4550

Soft Magnetic Alloys

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DESCRIPTION

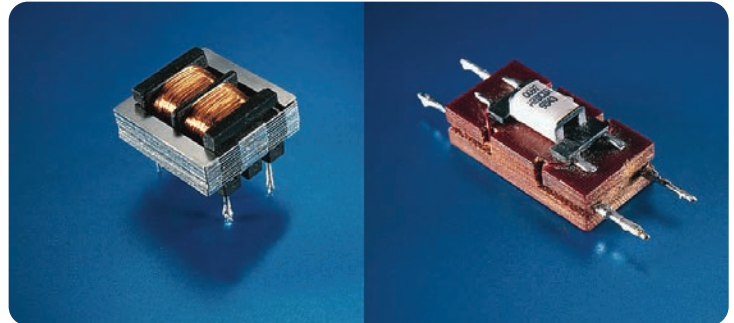
Radiometal 4550 is a Soft Magnetic Alloy consisting of 45% Nickel, balance Iron and has excellent permeability with high saturation flux density.

APPLICATIONS

Sensitive relays that need to respond to very weak currents. Radiometal 4550 is also widely used in transformers, chokes and special motors where the properties of silicon-iron do not provide the required magnetic performance.

SUMMARY OF TYPICAL PROPERTIES

Initial Permeability	dc μ 0.4	6,000
Maximum dc Permeability		40,000
Saturation Induction	tesla	1.6
	kGauss	16
Remanence from Saturation	tesla	1.0
	kGauss	10
Coercivity Hc dc	A/m	8
	mOe	100
Hysteresis Loss at Bsat	J/m³ cycle	40
Curie Temperature	°C	450
	°F	840
Density	kg/m³	8,250
	lb/in³	0.30
Resistivity	pΩ·m	0.45
	ohm-cir mil/ft	270
Coefficient of Linear Expansion	x10⁻⁶/°C	7
	x10⁻⁶/°F	3.9
Thermal Conductivity	W/m°C	13
	Btu-in/ft² h °F	89
Specific Heat	kJ/kg °C	0.46
	Btu/lb °F	0.11
Vickers Hardness:	HV	
Hard Rolled		240
Annealed - as supplied		130
Tensile Strength	MN/m²	470
Hard Rolled	kpsi	68
Youngs Modulus	GN/m²	167
Annealed	kpsi	24,000



FORMS AVAILABLE

- Strip/Coil - Hard Rolled** 0.015" (x 10" wide)
Inlac coated & uncoated
- Strip/Coil - Annealed** 0.015" (x 10" wide)
uncoated
- Rod** 0.625" - 1.570"

Strip/Coil can be slit to customers requirements, down to 0.1575" widths.

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.

The summary of typical properties, information, and recommendations made herein are based on the research of others and are believed to be accurate. However, nothing herein is to be taken as a warranty, expressed or implied, regarding the accuracy of the information or the use of this product. Purchasers should make their own tests and evaluation to determine the suitability of this product in their application.



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**



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efi
ED FAGAN INC.

6/2016

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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