



ED FAGAN INC.

Radiometal 4550

Soft Magnetic Alloys



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DESCRIPTION

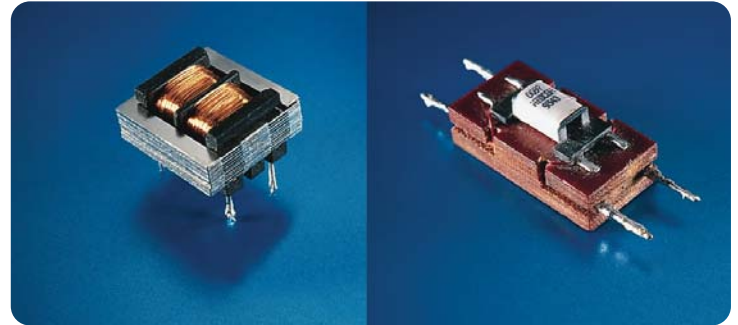
Radiometal 4550 is a Soft Magnetic Alloy consisting of 45% Nickel, balance Iron and has excellent permeability with high saturation flux density.

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



FORMS AVAILABLE

Strip/Coil - Hard Rolled	0.381mm (x 250mm wide) <i>Inlac coated & uncoated</i>
Strip/Coil - Annealed	0.381mm (x 250mm wide) <i>uncoated</i>
Rod	12.70mm x 50.80mm

Strip/Coil can be slit to customers requirements, down to 4mm widths.

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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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 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

SERVICES WE OFFER

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



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