



28

Ni
58.6934
Nickel

Nickel 233

Electrical, Electronic Nickel

efi ED FAGAN INC.
Special Purpose Alloys
THE MATERIALS YOU NEED, WHEN YOU NEED THEM

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toll free 800.348.6268

DESCRIPTION

Nickel 233 alloy is a **commercially pure wrought nickel alloy** that exhibits excellent corrosion resistance and high electrical and thermal conductivities. However, the alloy is subjected to intergranular embrittlement by sulfur compounds above 315°C

APPLICATIONS

Active cathodes; Vacuum tube anodes; Structural parts of tubes

TYPICAL PHYSICAL PROPERTIES

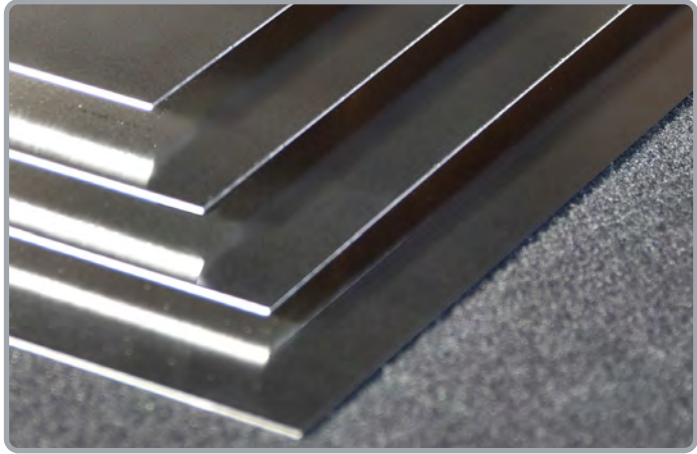
Density	lb/cu in	0.321
Specific Gravity		8.9
Curie Temp	°F	660
	°C	353
Melting Point	°F	2650
	°C	1454
Electrical Resistivity	Microhm-cm	7.4
	Ohm/cir mil/ft	44.51
Thermal Conductivity	BTU-in/sq. ft-hr-68 °F	605
Specific Heat	BTU/lbm °F	0.11
Thermal Expansion	ppm / °C (100 °C)	13.3

Source: Material Handbook a Concise Desktop Reference, pg. 36; EFi Data sheet 6/87

FORMS | SIZES AVAILABLE

Sheet	0.030" - 0.125"
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Listed above are our standard stock items. Our inventory fluctuates based on market demands. If you do not see the size or form you require, please call us.



TYPICAL MECHANICAL PROPERTIES*

Ultimate Tensile Strength	ksi	58.01
	MPa	400
Yield Strength (0.2% offset)	ksi	21.7
	MPa	150
Elongation in 50 mm	% in 2 in.	40
Modulus of Elasticity	10 ⁶ psi	29.6
	GPa	204
Hardness	HB	100

*[at room temp]

Source: Material Handbook a Concise Desktop Reference, pg. 36; EFi Data sheet 6/87

CHEMISTRY %

Nickel 99.0 min., Copper 0.10 max., Iron 0.10 max., Magnesium 0.10 max., Manganese 0.30 max., Carbon 0.10 max., Silicon 0.10 max., Sulfur 0.005 max., Titanium 0.005 max.
Source: ASTM F3, Table 3, UNS N02233 Grade 1

SPECIFICATIONS

ASTM F3 Grade 2 UNS N02233

769 Susquehanna Avenue, Franklin Lakes, NJ 07417
PH: 201.891.4003 | Toll Free: 800.335.6827



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Special Purpose Alloys & Metals From Stock

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Special Purpose Alloys

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Controlled Expansion | Glass Sealing

Ed Fagan Inc. supplies the highest quality metals and alloys including materials from Carpenter Technology Corp.

Kovar® | ASTM F15 Alloy

Forms: Plate, Round Bar, Sheet, Strip/Coil, Wire
Trade Names: Kovar®, Pernifer® 2918, NILO K®, DilverP1®

Alloy 42/46/48/52

Forms: Plate, Round Bar, Sheet, Strip/Coil, Wire
Trade Names: Pernifer®40, 46, 48, 50; NILO® 42, 46, 48, 50; Glass Seal 42, 46, 48, 50

Free-Cut Invar "36"® Alloy

Forms: Round Bar, Wire

Invar "36"® Alloy

Forms: Plate, Sheet
Trade Names: Pernifer® 36, NILO® 36, Invar

Super Invar 32-5®

Forms: Plate, Round Bar, Sheet

Refractory Metals and Alloys

Ed Fagan Inc. is your leading source for quality refractory metals and alloys. We stock Tungsten, Molybdenum and its alloys in various forms and sizes manufactured from Plansee Group.

Molybdenum

Forms: Plate, Precision Cut Wire, Round Bar, Sheet/Strip, Spooled Wire, Threaded Rod/Nuts

Molybdenum Lanthanum Oxide (ML)

Forms: Sheet – Stress Relieved, Recrystallized

Molybdenum TZM

Forms: Plate, Round Bar

Niobium

Forms: Plate, Round Bar, Sheet, Strip/Coil, Wire

Rhenium

Forms: Plate, Round Bar, Sheet, Strip/Coil

Tantalum

Forms: Round Bar, Sheet

Tungsten

Forms: Parts (To Specification), Plate, Precision Cut Wire, Round Bar, Sheet

Tungsten Alloy

Blank Forms: Flats, Parts, Plate/Sheet, Rod, Shapes

Soft Magnetic Alloys | EMI Shielding & Laminations

Ed Fagan Inc. is a distributor of "EMI shielding alloys" for VDM Metals GmbH the world's leading producer of these alloys.

EFI Alloy 50

Forms: Round Bar, Square Bar, Strip/Coil, Wire
Trade Names: Alloy 4750, High Permeability 49®, Magnifer® 50

EFI Alloy 79

Forms: Rectangular Bar, Round Bar, Sheet, Strip/Coil, Wire
Trade Names: Hipernom, HyMu80®, Magnifer® 7904, Molypermalloy, Permalloy 80®

Hiperco® 50, Hiperco® 50A, Hiperco® 50 HS

Forms: Plate, Round Bar, Strip/Coil

Carpenter VimVar Core Iron

Forms: Plate, Round Bar

Electrical & Electronic Nickels

Ed Fagan Inc. supplies select, commercially pure grades of Nickel in various forms and sizes.

Electronic Nickels

200/201/205/233/270

Forms: Round Bar, Sheet, Strip/Coil, Wire

Alloys and Metals We Distribute

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

Ed Fagan Inc. Services

Slitting, Shearing, Saw Cutting, Grinding, Water Jet Cutting, Laser Cutting,
Custom Stocking and Consignment Programs

JUST-IN-TIME DELIVERY: All of our **standard stock** items can be **shipped within 24-hours** of your order confirmation and most are **shipped the same day**. All materials certified with shipment. For special orders and non-stock materials, contact our sales team for our competitive pricing and delivery lead times.

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