

17-4PH Stainless Steel

(Type 630)



EFINEA

Capabilities Beyond Infinity

1-800-348-6268

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24

Cr

52.00

Chromium

Ni

9.00

Nickel

Fe

65.00

Iron

Type 17-4PH stainless steel, also referred to as Type 630, is a versatile alloy supplied in the solution-treated (annealed) condition. Known for its excellent combination of strength, corrosion resistance, and durability, it is particularly suited for manufacturing processes that build components layer by layer.

The material exhibits typical mechanical properties after aging, such as those achieved with H900 and H1150 heat treatments, and is widely used in aerospace, automotive, and medical applications due to its ability to meet demanding performance requirements.

Typical Mechanical Properties After Aging

Property	Condition	Condition
	H900	H1150
Density	0.2800 lb/in ³	0.2830 lb/in ³
Hardness (HRC)	44	33
Ultimate Tensile Strength	198 ksi	144 ksi
Yield Strength (0.2%)	183 ksi	126 ksi
Elongation in 2" (%)	15	20
Reduction of Area (%)	52	60

The material is supplied in the solution-treated (annealed) condition.

The H900 and H1150 properties listed are typical and exceed the minimums specified in ASTM-A564.

Forms Available

Round Bar .500" - 2.00"

Markets & Applications

Aerospace: Aircraft and missile fittings.

Industrial: Shafts, gears, and chemical processing equipment.

Medical: Instrumentation and surgical tooling.

Energy and Defense: Valve components and reactor parts.

General Hardness

17-4 PH provides adjustable hardness levels depending on the heat treatment condition:

H900: Maximum hardness for applications demanding high strength.

H1150: Improved ductility and toughness with moderate hardness.

CHEMISTRY

Iron (Balance), Chromium (15.00–17.50%), Nickel (3.00–5.00%),
Copper (3.00–5.00%)



SPECIFICATIONS

ASTM A564 • AMS 5643 • UNS S17400
AMS STD CLASS A

EFINEA METALS | www.efineametals.com | sales@efineametals.com

Special Purpose Alloys & Metal From Stock

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EFINEA Services

Slitting, Sheering, Grinding, Water Jet Cutting, Laser Cutting, Saw 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

Controlled Expansion | Glass Sealing

EFINEA Supplies the highest quality metals and alloys including materials from Carpenter Technology Corp.

Kovar® | ASTM F15® Alloy

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

Trade Names: Kovar, Pernifer®, 2918, NILO K®, DilverP1®

Alloy 42 / 46 / 48 / 52

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

Trade Names: Pernifer®40, 46, 48, 50, NILO®42, 46, 48; Glass Sealing 42, 46, 48, 52

Free-Cut Invar "36"® Alloy

Forms: Round Bar/Rod

Invar "36" Alloy

Forms: Plate Sheet

Trade Names: Pernifer® 36, NILO®36, Invar

Super Invar 32-5®

Forms: Plate, Round Bar/Rod, Sheet

Refractory Metals & Alloys

EFINEA is your leading source for quality refractory metals & alloys. We stock DFARS Molybdenum, ML/MLS/MLR, Molybdenum TZM Tantalum & Tungsten manufactured from Plansee

Molybdenum

Forms: Plate, Round Bar/Rod, Sheet/Coiled Sheet, Threaded Rod/Nuts, Wire

Molybdenum Lanthanum Oxide (ML)

Forms: Sheet-Stress Relieved, Recrystallized

Molybdenum TZM

Forms: Plate, Round Bar/Rod, Sheet

Niobium

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

Rhenium

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

Tantalum

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

Tungsten

Forms: Plate, Precision Cut wire, Round Bar/Rod, Sheet

Tungsten Alloys

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

Soft Magnetic Alloys | EMI Shielding & Laminations

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

EFINEA Alloy 50

Forms: Round Bar/Rod, Square Bar, Strip/Coil, Wire Rod

Trade Names: High Permeability 49®, Mangnifer®50

EFINEA Alloy 79

Forms: Rectangular Bar, Round Bar/Rod, Sheet, Strip/Coil

Trade Names: Hipernom, HyMu80 Magnifer®7904, Molypermalloy, Permalloy 80®

Hiperco®50

Forms: Strip/Coil

Hiperco®50A

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

Hiperco®50 HS

Forms: Strip/Coil

Core Iron (Pure Iron)

Forms: Round Bar/Rod, Plate

Trade Names: Electrical Iron®, Alliedpureiron®

Electrical & Electronic Nickels

EFINEA supplies select, Commercially pure grades of Nickel in various forms and sizes.

Electronic Nickels

200/201/205/233/270

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

Copper Metals

EFINEA supplies select, Commercially pure grades of Copper in Coil Form

Copper OFHC 101/102

Nickel-Silver 770

Cupro-Nickel 715 (CuNi 70/30)

Forms: Coil

Stainless Steels & Other Alloys

EFINEA supplies select aircraft quality grades of Stainless Steel available in various forms and sizes.

17-4PH (Type 630)

15-5PH Vac Melt

300 Grade Stainless Steel Coils

Forms: Round Bar/Coils

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