

17-4PH

DESCRIPTION

17-4PH, also known as UNS S17400, AMS 5604, DIN/EN 1.4542, and JIS SUS 630, is a precipitation-hardening stainless steel known for its high strength, excellent mechanical properties, and good corrosion resistance.

TYPICAL PHYSICAL PROPERTIES

Density	lb/in ³	0.2820
Mean Specific Heat	Btu/lb/°F	0.11
Thermal Conductivity	BTU-in/hr/ft ² /°F	124
Electrical Resistivity	Microhm-cm	98
Poisson's Ratio		0.272
Modulus of Elasticity	ksi	28 x 10 ⁶
Modulus of Rigidity	ksi	9.68 x 10 ³

Chemical Composition (% by weight)

Elements	Min	Max
Cu	3.00	5.00
Mn	-	1.00
P	-	0.04
Si	-	1.00
Ni	3.00	5.00
C	-	0.07
S	-	0.03
Cr	15.00	17.50
Fe	Balance	

APPLICATIONS

Utilized in critical aerospace components like landing gear, turbine blades, and structural parts due to its high strength and corrosion resistance.

TYPICAL MECHANICAL PROPERTIES

Tensile Strength	Mpa	1103
Yield Strength	Mpa	1000
Elongation	%	5
Hardness Rockwell	C	35
Thermal Conductivity	W/m-K	17.9

AVERAGE LINEAR COEFFICIENT OF THERMAL EXPANSION $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$

Coefficient of Thermal Expansion	110.8 (at 21°C)
Specific Heat Capacity	460 J/kg·K (at 100°C)
Melting Point	2560-2625°C

SPECIFICATIONS

- AMS: 5604
- ASME: SA693
- W. Nr./EN: 1.4548
- AMS 5643

Special Purpose Alloys & Metals From Stock

Controlled Expansion | Glass Sealing

Kovar ASTM F 15 Alloy

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

Alloy 32/42/48/49

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

VIM VAR CORE IRON

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

SUPRA 510 (Ni50FeCr10)

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

TITANIUM ALLOYS

TITANIUM TI-6AL-4V GRADE 5

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

TITANIUM GRADE 2

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

TITANIUM 6-2-4-6

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

TITANIUM BT20

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

PH ALLOYS

17-7PH

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

15-5PH

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

17-4PH

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

ALUMINIUM HARD ALLOYS

7475 AA7475/7449 AA7449

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

7075 UNS A97075

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

7050 AMS 4050

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

7175 UNS A97075

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

2014 AMS 4121

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

2024 UNS A92024

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

2618 UNS A92618

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

2017 AMS 4037

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

2011 UNS A92011

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

NICKEL BASED ALLOYS

WASPALLOY

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

INCONEL X750

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

INCONEL 945

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

INCONEL 945X

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

NIMONIC C263

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

NIMONIC 75

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

INCONEL 909

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

INCONEL 718

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

INCONEL 660

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

HIGH TEMP ALLOYS

HAYNES 188

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

L605

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

MP35N

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

MP159

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

RENE41

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

HAYNES 230

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

ELGILOY

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

HAYNES 242

- Forms: Plate, sheets, Round Bar, Rod, Strips, Coil

JUST-IN-TIME DELIVERY: All of our standard stock items can be delivery as per commitment. All materials are certified with shipment. For special orders and non-stock materials, contact our sales team for our competitive pricing and delivery.