

15-5PH Stainless Steel

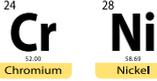
Vac Melt (XM-12)



EFINEA

Capabilities Beyond Infinity

1-800-348-6268



Description

15-5PH stainless steel is a martensitic precipitation/age-hardening stainless steel similar to 17-4PH, offering higher strength and hardness along with excellent corrosion resistance up to 600°F (316°C). It has good fabricating characteristics and can be age-hardened using a single-step, low-temperature treatment tailored to achieve specific strength and toughness combinations. This balanced combination of performance and ease of use makes 15-5PH stainless steel a versatile material for applications such as rapid tooling, functional components across various industries, and prototyping.

Physical Properties

Property	Condition H900	Condition H1150
Density	0.2820 lb/in ³	0.2830 lb/in ³
Hardness (HRC)	46	40
Ultimate Tensile Strength	210 ksi	170 ksi
Yield Strength (0.2%)	188 ksi	145 ksi
Elongation in 2" (%)	13.9	18
Reduction of Area (%)	44	55

Markets & Applications

Aerospace: Structural components, fittings.

Medical: Surgical instruments, tools.

Industrial: Pumps, valves, manifolds, impellers.

Petrochemical: Process equipment.

General Hardness

15-5 PH provides excellent hardness levels depending on the heat treatment condition:

H900: Maximum strength and hardness for demanding applications.

H1150: Balanced toughness and corrosion resistance with moderate hardness.



CHEMISTRY

Iron (71.91–77.71%), Chromium (14.00–15.50%), Nickel (3.50–5.50%),
Copper (2.50–4.50%)

SPECIFICATIONS

AMS 5659 • ASTM A564/A564M • UNS S15500
AMS STD CLASS A