

Technical datasheet

17-4PH | 1.4548

Major specifications

1.4548.4	UNS S17400	AMS 5622	AMS 5643	WL 1.4548.4	1.4548.9
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Available product forms

Round bars and Flat bars in 1.4548.4, Condition H 1025, solution annealed and hardened

Round bars in 1.4548.9, Condition A, solution annealed

The current stock range can be found on www.sd-metals.com.

Further dimensions available upon request.

Key features

The high alloy steel 17-4PH is one of the most commonly used precipitation hardened stainless steels. It contains about 17% chromium and 4% nickel with additions of copper. This type of steel has a martensitic crystalline structure in combination with a very hard and brittle structure that is due to stabilization via precipitation heat treatment. The corrosion resistance of 17-4PH is comparable to that of 304 stainless steel in most media. An excellent combination of high strength and good corrosion resistance at temperatures up to 316°C make this stainless steel extremely versatile and an effective solution for many applications.

Applications

- chassis
- valves and engine components
- molding tools
- food processing equipment
- chemical processing equipment
- refinery equipment
- high strength shafts

Chemical properties

Composition - limits in %

Cr	Ni	Cu	Mn	Si	Mo	Nb	C	Fe
15,0 - 17,0	3,0 - 5,0	3,0 - 5,0	max. 1,50	max. 0,70	max. 0,60	max. 0,45	max. 0,07	Rest

Physical and thermal properties

Density	7,75 g/cm ³
Melting temperature	1404 - 1440 °C
Thermal conductivity bei 20°C	18,4 W/m • °C
Coefficient of expansion at 21-93°C	10,8 µm/m • °C

Typical mechanical properties (room temperature, Condition H1025)

Yield strength	min. 1000 MPa
Tensile strength	min. 1070 MPa
Elongation	min. 11 %

All information is subject to change without notice.

The properties correspond to the material in the heading. They may vary for other specifications.

Please contact us for more details.