

DATA SHEET

17-4PH | 1.4548

Major specifications

1.4548.4 | UNS S17400 | AMS 5622 | AMS 5643 | WL 1.4548.4 | 1.4548.9

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.

Areas of application

Chassis, valves, engine components, molding tools, food processing equipment, chemical processing equipment, refinery equipment and high strength shafts.

CHARACTERISTIC

Chemical composition limits in %

Fe	Rest
Cr	15,00 - 17,00
Cu	3,00 - 5,00
Ni	3,00 - 5,00
Mn	max. 1,50
Si	max. 0,70
Mo	max. 0,60
Nb	max. 0,45
C	max. 0,07

Physical constants and thermal properties

Density	7,75 g/cm ³
Melting point	1404 - 1440 °C
Thermal conductivity at 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.

Do you have any questions? Contact us:

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