DATA SHEET
15-5PH | 1.4545

Major specifications
AMS 5659 | WL 1.4545.4 | 1.4545.4 | 1.4545.9

Product forms
Round bars and flat bars in 1.4545.4, Condition H1025, solution annealed and hardened
Round bars in 1.4545.9, Condition A, solution annealed
The current Stock Range can be found on www.sd-metals.com. Further dimensions available upon request.

Key features
15-5PH is a martensitic stainless steel containing about 15% chromium and 5% nickel with additions of copper. It is a precipitation hardening stainless steel that has the same properties as its original predecessor 17-4PH. Precise control of the melting and subsequent forming process results in a unique structure that contributes to increased toughness and ductility of the alloy compared to 17-4PH. In many corrosive environments, its resistance is better than that of 410 stainless steel and comparable to that of 302 and 304 stainless steels. Because of this combination of mechanical properties and corrosion resistance, 15-5PH is used in a wide range of applications.

Areas of application
Fasteners, valves, gears, pumps, chassis, power generation, food processing, oil and gas.

CHARACTERISTIC

Chemical composition limits in %

Fe	Rest
Cr	14,00 - 15,50
Ni	3,50 - 5,50
Cu	2,50 - 4,50
Mn	max. 1,00
Si	max. 1,00
Nb	max. 0,45
C	max. 0,07
Mo	max. 0,05

Physical constants and thermal properties

Density	7,8 g/cm³
Melting point	1404 - 1440 °C
Thermal conductivity at 150°	17,8 W/m • °C
Coefficient of expansion at 21-93 °C	10,8 µm/m • °C

Typical mechanical properties
(room temperature according to AMS 5659, Condition H1025)

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

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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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