

DATA SHEET

ALLOY 625 | 2.4856

Major specifications

UNS N06625 | ASTM B 446 | AMS 5666 | AMS 5599 | NACE MR-0175

Product forms

Round bar

The current Stock Range can be found on www.sd-metals.com. Further dimensions available upon request.

Key features

Alloy 625 is used due to its high strength and excellent corrosion resistance in aqueous media as well as in high temperature oxidizing and carburizing environments. The high chromium and molybdenum content provides a high degree of pitting and crevice corrosion resistance to chloride-containing media such as seawater, neutral salts and salt solutions. The alloy is highly resistant to chloride stress corrosion cracking due to its high nickel content. The strength of Alloy 625 is derived from the matrix-strengthening effect of molybdenum and niobium, which means hardening heat treatments are unnecessary. Alloy 625 retains its excellent ductility and toughness at cryogenic temperatures. It also has excellent malleability and is easy to weld.

Areas of application

Seals and closures, piping and exhaust systems, motorsport exhaust systems, bellows and expansion joints, furnace equipment, valve components.

CHARACTERISTIC

Chemical composition limits in %	Physical constants and thermal properties	Typical mechanical properties (room temperature)
Ni min. 58,00	Density 8,44 g/cm ³	Yield strength min. 330 MPa
Cr 20,00 - 23,00	Melting point 1290 - 1350 °C	Tensile strength min. 730 MPa
Mo 8,00 - 10,00	Thermal conductivity 9,8 W/m • °C	Elongation min. 35 %
Fe max. 5,00	Coefficient of expansion 12,8 µm/m • °C at 21-93°C	
Nb 3,15 - 4,15		
Mn max. 0,50		
Si max. 0,50		
Al max. 0,40		
Ti max. 0,40		
C max. 0,10		

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.