BIBUS METALS

Technical datasheet

Alloy 625 / W-Nr. 2.4856

A nickel-chromium-molybdenum alloy strengthened by additions of niobium Alloy 625 combines excellent corrosion resistance in a wide range of environments with good mechanical properties and elevated temperature strength

Available products

Product form	Size range from	Size range to
Sheet/plate	0.5 mm thickness	12.0 mm thickness
Bar	8.0 mm diameter	130.0 mm diameter
Tube/pipe	6.0 mm outside diameter	219.1 mm outside diameter

Chemical composition (%)

Ni	Cr	Mo	Nb	Fe	Al	Ti	C
58.0 min	20.0-23.0	8.0-10.0	3.15-4.15	5.0 max	0.4 max	0.4 max	0.1 max

Major specifications

ASTM B443, B444, B446, B564, B829	UNS N06625
AMS 5559, 5666, 5869	DIN 17750, 17751, 17752

Physical properties

Density	8.44 g/cm^3
Melting range	1290-1350°C

Mechanical properties – typical room temperature properties

Yield strength	330 MPa
Tensile strength	730 MPa
Elongation	35 %

Key attributes

Alloy 625 is very versatile and is used for its high strength and excellent corrosion resistance in a wide range of applications and service conditions. In sea water and brackish waters Alloy 625 is resistant to localised forms of attack such as pitting and crevice corrosion. It has high resistance to corrosion by mineral acids such as nitric, phosphoric, sulphuric and hydrochloric acids as well as alkalis and organic acids. Owing to its high nickel content Alloy 625 is immune to chloride-ion stress corrosion cracking. At high temperatures it has good resistance to oxidation and scaling.

Alloy 625 has excellent forming and welding characteristics and can be readily formed by cold working. Please contact us for further details on forming, fabrication and welding consumables.

Applications

Gaskets and seals
Ducting and exhaust systems
Bellows and expansion joints
Furnace equipment
Hydraulic line tubing
Piping systems
Fittings, flanges and valves