BIBUS METALS

Technical datasheet

Alloy S80 / W-Nr. 1.4044.6

S80 steel is a ~16% Chromium stainless steel modified by the addition of Nickel. Ideal for heavy-duty, high-stress applications requiring high tensile strength and resistance to environmental challenges.

Available products

Product form	Size range from	Size range to
Bar	12.00 mm diameter	80.00 mm diameter

Chemical composition (%)

Fe	Cr	Ni	Mn	Si	S	P	C
Balance	15.0-18.0	2.0-3.0	1.0 max	1.0 max	0.025 max	0.03 max	0.12-0.20

Major specifications

AMS 5628	UNS S43100
ASTM A276	DIN 1.4044.6

Physical properties

Density	7.75 g/cm^3
Melting range	1450-1510°C

Mechanical properties – typical room temperature properties

Yield strength	690 MPa
Tensile strength	1080 MPa
Elongation	12 %

Key attributes

A stainless steel containing around 16% chromium with additions of nickel designed to achieve high mechanical properties through a conventional electric arc melting process. With moderate corrosion resistance this grade finds application in areas where mechanical properties higher than those of 410 stainless steel are required and where corrosive conditions are not too severe.

Applications

Machine tool industry
Aircraft fittings
High strength fasteners
Pump shafts
Valve components
Chemical plant
Marine engineering

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.