

DATA SHEET

SAE 51431 | 1.4044

Major specifications

WL 1.4044.6 | Z15CN 17-03
hardened and tempered

Product forms

Round bars

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

Key features

SAE 51431 is a stainless steel containing about 16% chromium with additions of nickel and achieves high mechanical properties through a conventional arc melting process. Due to moderate corrosion resistance, SAE 51431 is used in areas with lower corrosive requirements but higher mechanical properties than those of 410 stainless steel.

Areas of application

Machine tool industry, aircraft fittings, pump shafts, valve components, bolts and screws and chemical equipment.

CHARACTERISTIC

Chemical composition limits in %	Physical constants and thermal properties	Typical mechanical properties (room temperature, hardened and tempered)
Fe Rest	Density 7,7 g/cm ³	Yield strength min. 700 MPa
Cr 15,00 - 18,00	Melting point 1450 - 1510 °C	Tensile strength min. 900, max. 1100 MPa
Ni 2,00 - 3,00	Thermal conductivity at 20°C 25 W/m • °C	Elongation min. 12 %
Mn max. 1,00	Coefficient of expansion at 21-100°C 10,6 µm/m • °C	
Si max. 1,00		
C 0,12 - 0,20		
P max. 0,03		
S max. 0,025		

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:

Michael Brackenwagen

+49 4174 66 94 -116

m.brackenwagen@sd-metals.com

Veronika Droßbach

+49 4174 66 94 -117

v.drossbach@sd-metals.com