S+D METALS

A BIBUS GROUP COMPANY

Technical datasheet

SAE 51431 | 1.4044

Major specifications

WL 1.4044.6 hardened and tempered	Z15CN 17-03

Available 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.

Applications

- machine tool industry
- aircraft fittings
- pump shafts
- valve components
- bolts and screws
- chemical equipment

Chemical properties

Composition - limits in %

Cr	Ni	Si	Mn	C	P	S	Fe
15,0 - 18,0	2,0 - 3,0	max. 1,0	max. 1,0	0,12 - 0,2	max. 0,030	max. 0,025	Rest

Physical and thermal properties

Density	7,7 g/cm^3
Melting temperature	1450 - 1510 °C
Thermal conductivity at 20°C	25 W/m • °C
Coefficient of expansion at 21-100°C	10,6 µm/m • °C

Typical mechanical properties (room temperature, WL 1.4044.6 hardened and tempered)

Yield strength	min. 700 MPa
Tensile strength	min. 900, max. 1100 MPa
Elongation	min. 12 %

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.

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