

First Choice for Decoration

Material datasheet for **1.4104** | **S43020** | **X14CrMoS17** | **AISI 430F**

1.4104 is a **stainless martensitic steel**, which is **readily machinable** through the application of welding filler. However, the high sulphur content reduces its corrosion resistance, and this is particularly noticeable in chloride media. Its mechanical properties can be enhanced through quenching and tempering.

Due to its excellent machinability, 1.4104 is widely used in the automotive industry and in hydraulic engineering, as well as in the manufacture of bolts, axles, spindles, nuts and fittings. In addition, the highly regarded visual appearance of this steel grade means it is increasingly used in decorative applications, such as kitchen fitting elements.

WELDING

1.4104 is generally not weldable, except with the resistance and friction welding methods.



BAR STEEL

AVAILABLE DIMENSIONS

34, 40, 42, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120, 125, 130, 140, 150, 160, 170, 180, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 325, 350 and 400 mm



APPLICATIONS

- Decorative purposes
- Automotive industry
- Electronic equipment

MACHINING

The addition of sulphur particularly improves chip-breaking behaviour and machinability compared to other chromium alloyed steel grades. The cutting speed of carbide tools can be increased by 2 to 3 times.

MECHANICAL PROPERTIES UNDER HIGH TEMPERATURES

1.4104 is not suitable for machining at elevated temperatures.

MECHANICAL PROPERTIES AT ROOM TEMPERATURE

Stated values apply to bar steel up to 160 mm max.
(EN 10088-3)

Heat treatment condition: QT 650	Tensile strength Rm (N/mm²): 650 - 850
Yield strength Rp0.2 (N/mm²): at least 500	Elongation at fracture A5 (%): longitudinal: min. 10

CHEMICAL ANALYSIS

Chem. element	1.4104	
	min.	max.
C	0.1	0.17
Si	-	1.0
Mn	-	1.5
P	-	0.04
S	0.15	0.5
Cr	15.5	17.5
Mo	0.2	0.6

HEAT TREATMENT

Solution annealing: 750 - 850 °C	Cooling: Air, oven, polymer or oil
Hot forming: 800 - 1100 °C	Tempering: 550 - 650 °C
Hardening: 950 - 1070 °C	

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INOX INTELLIGENCE.

Note: All information regarding material properties, recommendations for use of the material, and available delivery configurations have been carefully researched, and is provided according to the best of our knowledge. However, no guarantee is made for the information provided. In the case of orders, all information and data must always be agreed in a separate written agreement.