

First Choice for Cutting Tools and Blades

Material datasheet for 1.4112 | X90CrMoV17 | AISI 440B

1.4112 is a **stainless martensitic steel** with **ample corrosion resistance and high wear resistance**.

Because of its very high edge-holding properties, it offers extremely high cutting performance and is therefore a designated blade steel grade.

1.4112 is widely found in the food industry, where it is used for shaped blades and flat blades. 1.4112 is also used in the manufacture of surgical cutting tools and with mould inserts in plastic processing, as well as for tool-making and clamping jigs in the car-making industry.

WELDING

There is no suitable welding method available for this corrosion-resistant material.



ROUND BAR STEEL

AVAILABLE DIMENSIONS

20, 25, 28, 30, 35, 36, 40, 45, 50, 55, 60, 65, 70, 75, 76.4, 80, 85, 90, 95, 100, 105, 110, 115, 120, 125, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 325, 350, 375 and 400 mm



APPLICATIONS

- Surgical cutting tools and blades
- Mechanical engineering and tool-making
- Food industry
- Construction industry
- Wearing parts
- Medical technology

MECHANICAL PROPERTIES UNDER HIGH TEMPERATURES

1.4112 is not suitable for machining at elevated temperatures.

MECHANICAL PROPERTIES AT ROOM TEMPERATURE

Stated values apply to bar steel up to 100 mm max.

(EN 10088-3)

Heat treatment condition:

Annealed

HEAT TREATMENT

Annealing:

780 - 840 °C

Hot forming:

800 - 1100 °C

Hardening:

1000 - 1050 °C

Cooling:

Air, oven or oil

CHEMICAL ANALYSIS

Chem. element	1.4112	
	min.	max.
C	0.85	0.95
Si	-	1.0
Mn	-	1.0
P	-	0.04
S	-	0.015
Cr	17	19
Mo	0.9	1.3
V	0.07	0.12

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