

First Choice for the Food Industry

Material datasheet for 1.4125 | S44004 | X105CrMo17 | AISI 440C

1.4125 is a **martensitic** material with a high carbon content giving it high **wear resistance and good cuttability properties** but it has low acid-resistance. Compared to 1.4112, the steel has even higher hardenability, however this reduces its machinability and corrosion resistance.

1.4125 is mainly used for tool attachments and parts exposed to very high abrasion loads demanding a very high level of hardness. This includes blades and accessories for grinders in the food industry, as well as surgical cutting tools and mould inserts for plastic processing applications and chemically aggressive moulding materials.

WELDING

1.4125 is generally not weldable.



ROUND BAR STEEL

AVAILABLE DIMENSIONS

20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 100, 110, 120, 130, 140, 150, 160 and 180 mm



APPLICATIONS

- Blades and cutting tools in the food industry
- Mechanical and plant engineering for ball bearing, injection nozzle and valve applications
- Medical technology

MACHINING

The high carbon content gives this material high hardenability properties, which in turn means it has poor machinability.

MECHANICAL PROPERTIES UNDER HIGH TEMPERATURES

1.4125 is not suitable for machining at elevated temperatures.

MECHANICAL PROPERTIES AT ROOM TEMPERATURE

No information available

HEAT TREATMENT

Heat treatment condition: Annealed	Cooling: Air, oven or oil
Hardening: 1000 - 1050 °C	

CHEMICAL ANALYSIS

Chem. element	1.4125	
	min.	max.
C	0.95	1.20
Si	-	1.0
Mn	-	1.0
P	-	0.04
S	-	0.04
Cr	16.0	18.0
Mo	-	0.80

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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.