

Technical data sheet – X46Cr13 (1.4034)

- Stainless steel

Applications: cutting tools, razors, table knives

Chemical composition (acc. DIN EN 10250-4 (08/2021))

mass fraction in %				
X46Cr13	C [%]	Si [%]	Mn [%]	Cr [%]
	0,43 – 0,50	≤ 1,00	≤ 1,00	12,50 – 14,40
	P [%] max.	S [%] max.	Mo [%]	Cu [%]
	0,040	0,015	-	-
	Ni [%]	V [%]		
	-	-		

ISO 9001: 2015 TÜV NORD certified.



Heat treatment (acc. DIN EN 10250-4 (08/2021))

Forging	800 – 1.100 °C	slow cool down
Annealing	730 - 790 °C	
Hardening	1.000 – 1.100 °C	Oil
Hardening	1.000 – 1.100 °C	Air
Tempering	250 – 350 °C	

Mechanical properties (acc. DIN EN 10088-3 (12/2014))

Round

Dimension	0,2% Yield Strenght (Rp0,2)	Tensile Strenght (Rm)	Elongation (A 5,65)	ISO-V/Charpy-V
<= 10 mm	>= 700 MPa	<= 900 – 1.150 MPa	>= 7 %	>= 12 J
10 – 16 mm	>= 700 MPa	<= 900 – 1.150 MPa	>= 7 %	>= 12 J
16 – 40 mm	>= 650 MPa	<= 850 – 1.100 MPa	>= 8 %	>= 12 J
40 – 63 mm	>= 650 MPa	<= 850 – 1.000 MPa	>= 8 %	>= 12 J
63 – 160 mm	>= 650 MPa	<= 850 – 1.000 MPa	>= 10 %	>= 12 J

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