

Steel grade

Material No.	PREMIUM 316Ti
AISI	316Ti; S31635
Search for alternatives in the ABRAMS STEEL GUIDE	www.abrams-steelguide.com/alternatives/316Ti

Shapes



**Smart Flat Stock [Smart]
Standardized Precision Blanks**
L: 12"
L: 24"



**Smart Flat Stock Metric [SmartM]
Standardized Precision Blanks Metric**
L: 300 mm
L: 600 mm



**ColdFinished Rounds Metric [CFM]
Precision Round Bars Metric**
L: 914 mm (36")

Chemical composition AISI 316Ti (reference value %)

C	Si	Mn	P	S	Cr	Mo	Ni	Ti
0 - 0.08	0 - 1.0	0 - 2.0	0 - 0.045	0 - 0.015	16.5 - 18.5	2.0 - 2.5	10.5 - 13.5	0 - 0.7

Physical properties

Hardness (delivery condition)	max. 215 HB, annealed				
Tensile strength R_m (as received condition)	approx. 100.0 KSI				
Working hardness	max. <20 HRC				
Thermal expansion coefficient $10^{-6}m/(m \cdot K)$	68 - 212°F	68 - 392°F	68 - 572°F	68 - 752°F	68 - 932°F
	16.5	17.5	18.0	18.5	19.0
Thermal conductivity $W/(m \cdot K)$	68°C				
	15.0				

Technical properties

Stainless steel, austenitic chrome-nickel-molybdenum, stabilized with titanium. Resistant to seawater, diluted sulphuric and hydrochloric acids, and to intergranular corrosion following welding processes. Has excellent cold working properties, very good weldability and temperature resistance up to 1112 degrees Fahrenheit, non-magnetisable.

Applications

Chemical industry, textile industry, oil industry, building industry, food industry, soap industry, paper industry, photographic industry, paint industry, rubber industry, mechanical engineering, apparatus engineering, pump construction, compressor construction, pipeline construction, shipbuilding, medical technology, pharmaceutical industry, nuclear engineering.

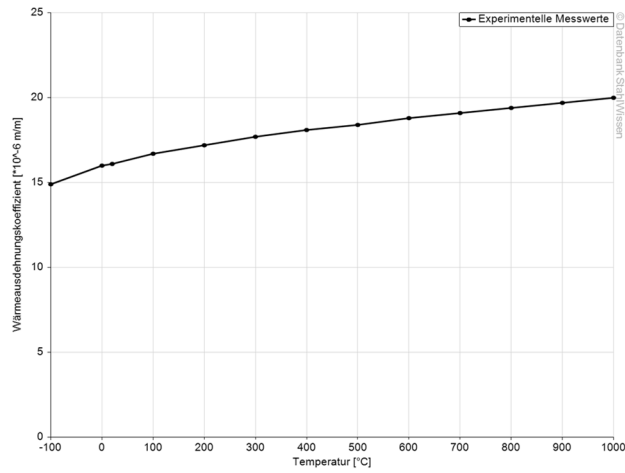
Heat treatment

	Temperature	Cooling	Hardness
Soft annealing	1868 - 2030°F	Air	max. 215 HB



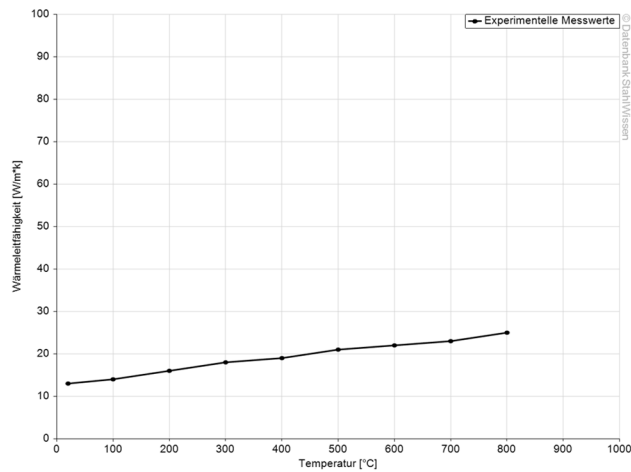
Thermal expansion coefficient diagram

Werkstoff: X6CrNiMoTi17-12-2, 1.4571



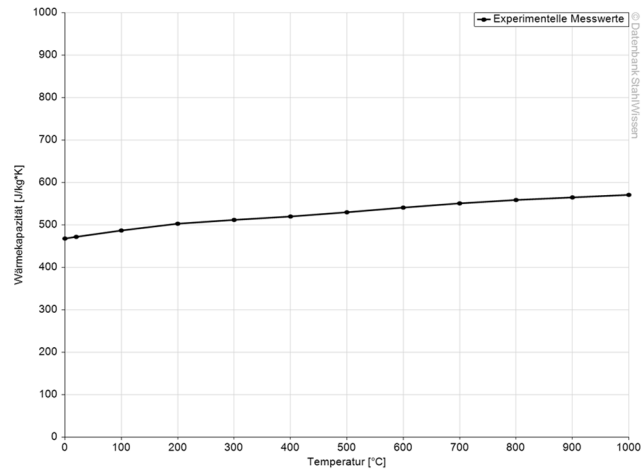
Thermal conductivity diagram

Werkstoff: X6CrNiMoTi17-12-2, 1.4571



Thermal capacity diagram

Werkstoff: X8CrNiMoTi17-12-2, 1.4571



The data shown here is to be used only as an indication of the statistics, thus we accept no liability.
 Diagramsare taken from Datenbank StahlWissen Dr. Sommer Werkstofftechnik
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