

Steel grade

Material No. / Werkstoff-Nr.	PREMIUM 1.4301
Description	X5CrNi18-10
AISI/SAE	304; S30400
Search for alternatives in the ABRAMS STEEL GUIDE®	www.steel-guide.eu/alternatives/304

Specifications



€co-Präz* [€co]
L: 500 mm



Precision round steel
without machining allowance [PRS]
bright drawn / ground, ISO h9
L: 1.000 mm

Chemical composition AISI/SAE 304 (reference value %)

C	Si	Mn	P	S	Cr	Ni	N
0 - 0,7	0 - 1,0	0 - 2,0	0 - 0,045	0 - 0,015	17,5 - 19,5	8,0 - 10,5	0 - 0,11

Physical properties

Hardness (delivery condition)	max. 215 HB, annealed					
Tensile strength R_m (as received condition)	approx. 690 N/mm ²					
Working hardness	max. < 20 HRC					
Thermal expansion coefficient $10^{-6}m/(m \cdot K)$	20 - 100°C	20 - 200°C	20 - 300°C	20 - 400°C	20 - 500°C	
	16,0	16,5	17,0	17,5	18,0	
Thermal conductivity $W/(m \cdot K)$	20 °C					
	15,0					

Technical properties

Corrosion resistant austenitic stainless chrome-nickel-steel with good processability and attractive appearance (ground-high-gloss polished). It has excellent deep drawing properties, is weldable and wear resistant but non-magnetisable and limited machining properties. Average mechanical properties, and conditionally acid resistant.

Applications

Food industry, photographic industry, paint industry, oil industry, soap industry, paper industry, textile industry, mechanical engineering, turned parts, fittings construction, kitchen equipment, decoration.

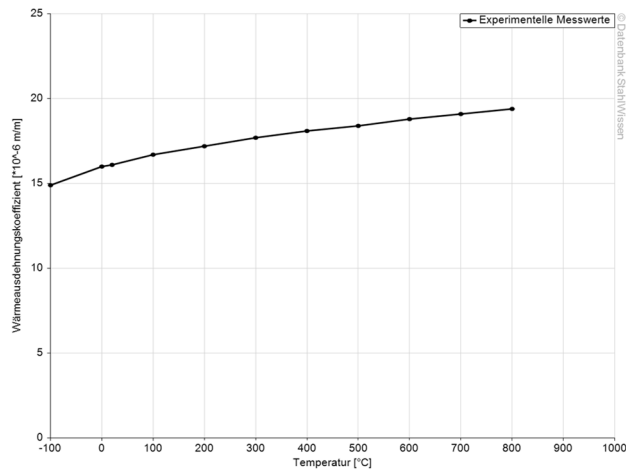
Heat treatment

Soft annealing	Temperature	Cooling	Hardness
	1000 - 1080°C	Air	max. 215 HB



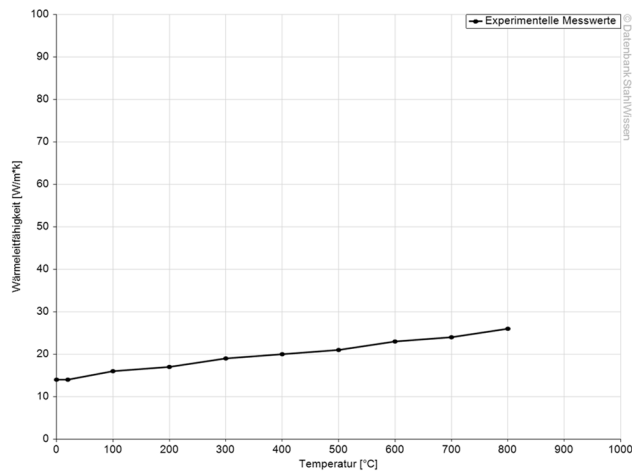
Thermal expansion coefficient diagram

Werkstoff: X5CrNi18-10, 1.4301



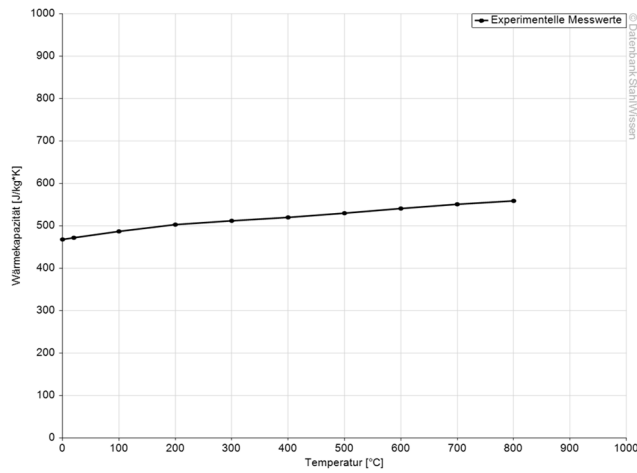
Thermal conductivity diagram

Werkstoff: X5CrNi18-10, 1.4301



Thermal capacity diagram

Werkstoff: X5CrNi18-10, 1.4301



The data shown here is to be used only as an indication of the statistics, thus we accept no liability.
 Diagrams are taken from Datenbank StahlWissen Dr. Sommer Werkstofftechnik
 Issued: 2012

