

Material Data Sheet

1.4878 (X8CrNiTi18-10)

Austenitic heat-resistant stainless steel

Short description 1.4878 or AISI 321H is an austenitic, heat-resistant chromium-nickel steel stabilized by the addition of titanium and comparable to 1.4541. 1.4541 is often dually certified as 1.4878.

Standards and Designations

EN	1.4878
DIN	X8CrNiTi18-10
AISI	321H
UNS	S32109

Chemical Composition

	C (Carbon)	Mn (Mangan)	Si (Silicium)	P (Phosphor)	S (Sulfur)	Cr (Chrome)	Ni (Nickel)	Ti (Titanium)
min.	0,04	-	-	-	-	17,0	9,0	5xC
max.	0,10	2,0	1,0	0,045	0,015	19,0	12,0	0,8

General Properties

corrosion resistance	good
weldability	excellent

Special Features

Scale-resistant up to 850°C

Corrosion resistance

Good corrosion resistance is achieved in natural environments with low salt and chlorine content. Material 1.4878 is resistant to intergranular corrosion both in the as-delivered and welded condition, but not seawater-resistant.

Mechanical Properties at 20°C

Hardness HB	Yield strength Rp0,2 N / mm ²	Tensile strength Rm N / mm ²	Stretching A5,65	Elastic modulus kN / mm ²
≤ 215	≥ 190	500 - 700	≥ 40%	200

Weldability

1.4878 can be welded using all common welding processes, with or without filler metal. Post-welding heat treatment is not required.

Machinability

1.4878 is prone to work hardening during machining. Due to this, and its poor thermal conductivity, it should be machined using high-speed steel or carbide tools. Adequate cooling should be ensured during machining.

Application areas Apparatus and container construction, automotive industry, construction industry, chemicals, petrochemicals, food industry, nuclear technology, pulp and paper industry

Physical Properties at 20°C

Density at 20°C kg/dm ³	Electrical Resistance at 20°C (ohm) mm ² /m	Magnetizability	Thermal conductivity at 20°C W/m K	Specific heat capacity at 20°C J/kg K
7,9	0,73	gering	15	500

Notice The values and information listed above regarding the properties and/or usability of the material are for informational purposes only. This information is based on the manufacturer's experience. All information is provided without guarantee. Subject to printing errors, mistakes, and changes.

BANKVERBINDUNGEN

OLDENBURGER VOLKSBANK
 IBAN DE98 2806 1822 0065 3616 00
 BIC GENODEF1EDE

LZO RASTEDE
 IBAN DE07 2805 0100 0043 3308 93
 BIC SLZODE22XXX

OLB RASTEDE
 IBAN DE54 2802 0050 1443 1738 00
 BIC OLBODEH2XXX

KONTAKT

Telefon +49 (0) 4402-9249-0
 E-Mail info@witte-tube.com
 Web www.witte-tube.com

FIRMENKENNUNG

Sitz Rastede || Tom Witte, Jörn Schieck
 eingetr. im Handelsregister Oldenburg
 HRB 205739 || VAT Nr. DE 277 933 982