

1.4541

1.4541 has excellent resistance to a wide variety of corrosive media including hot oil products, steam and combustion gases. In continuous operation in air, good resistance to oxidation up to 900 ° C, with temperature changes up to 800 ° C. When operating in carbon dioxide resistant up to 650 ° C. After all known welding methods easily weldable. It is alloyed with titanium carbide and therefore grain decay resistant according to EN ISO 3651, so that, independent of the cross-sectional, a thermal after-treatment after welding is not required. The material is characterized by good ductility. For machining only well-sharpened tools are to be used, otherwise held a strong surface hardening which complicates further processing.

Gehe zu +

Material Data Sheet

Material Designation	1.4541
AISI/SAE	321
EN Material Symbol	X6CrNiTi18 10
UNS	S 32100
AFNOR	Z 6 CNDT 18-10
B.S.	321 S 31, 321 S51, 321 S18; 321 S 12
Norm	VdTUEV 454

Main fields of application of 1.4541

1.4541 is mainly used in the sectors of nuclear power (also in liquid sodium), reactor instrumentation, chemical apparatus (very good corrosion resistance), eg for production of acetic and nitric acid, heat exchangers, furnaces, paper and textile industries, petroleum refining and petrochemicals, grease and soap industry, food industry, dairy and fermentation plants.

Chemical composition of 1.4541

C	Si	Mn	P	S*	Cr	Ni	Ti
≤ %	≤ %	≤ %	≤ %	≤ %	%	%	≤ %
0.08	1,0	2,0	0,045	0,015	17,0-19,0	9,0-12,0	5 x C ≤ 0.70

* S ≤ 0,30 (for long term products)

S = 0,015 – 0,030 (for products to be processed)

Characteristics of 1.4541

Temperature Range	Density kg/dm3	Hardness HB 30
Up to 550° C	7.9	≤ 215

Filler metal (for welding with 1.4541)

1.4316, 1.4551, 1.4576

Material Outlet by Hempel

ECONOXX.com offers buyers a new and uncomplicated procurement channel, which also includes small quantities and materials in special alloys at favourable conditions.

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