

AUSTENITIC STEELS

Available Product Variants

Plates

Product Description

Aviation and aerospace industries, e.g.: washers

Properties

Titanium stabilized, austenitic chromium nickel steel which resists intergranular corrosion in the temperature range up to 400°C (752°F). No post-weld heat treatment required. The steel is resistant to atmospheric corrosion and the action of steam, water and acid as well as alkaline solutions. For optimum resistance, surfaces should be pickled. Cold forming properties are very good. The steel is not capable of taking a mirror finish.

Applications

> Other Aerospace Comps.

> Structural parts (Aerosp)

Technical data

Material designation		Standards	
1.4544	SEL	5510	AMS
1.4541		5645	
1.4878		5689	
S32100	UNS	S524	BS
S32109		S526	
X6CrNiTi18-10	EN	321S31	
X12CrNiTi18-9		~S129	
321	AISI	S526	
321H			
SUS321	JIS		
Alloy 321	Market grade		

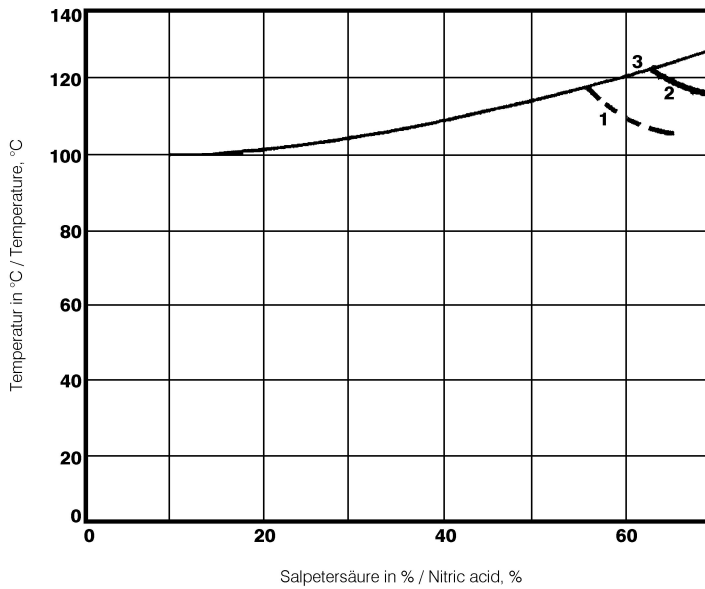
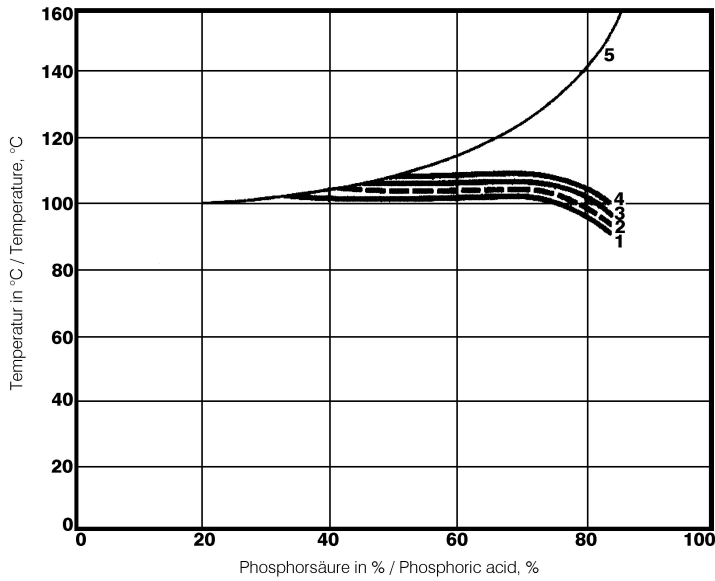
Chemical composition (wt. %)

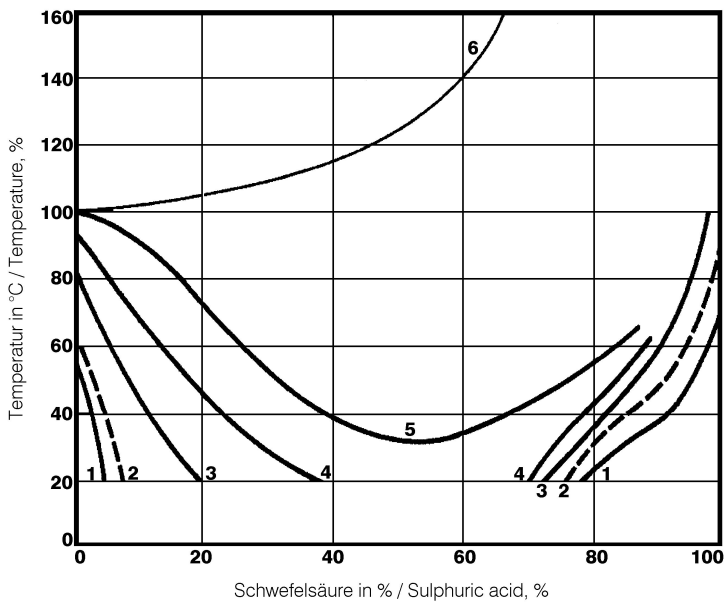
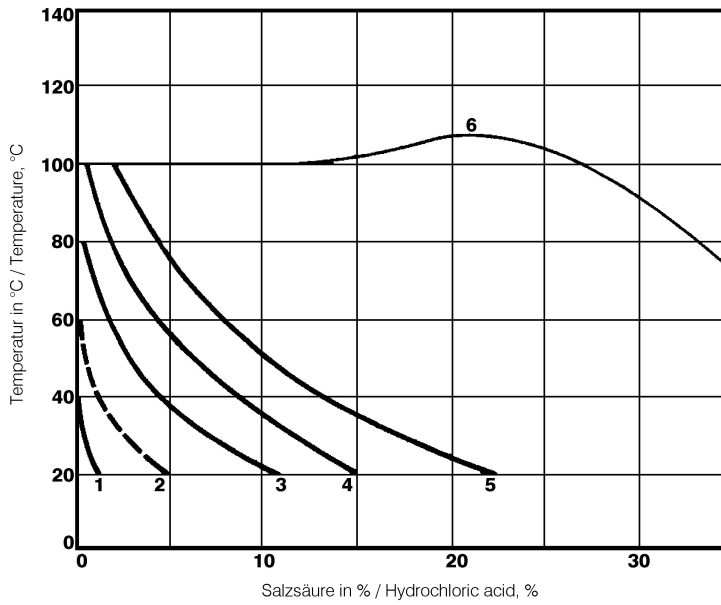
C	Si	Mn	Cr	Ni	Ti
0.03	0.5	1.7	17.5	9.7	≥ 5xC

Heat treatment

Solution annealing

Temperature	1,020 to 1,120 °C 1,868 to 2,048 °F	Water, air (thickness below 2 mm)
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Physical Properties

Density	7.9 0.29	[kg/dm ³ lb/in ³]
Thermal conductivity	15 8.67	[W/(m.K) BTU/ft h °F]
Specific heat	500 119.423	[kJ/kg K BTU/lb °F]
Spec. electrical resistance	0.73 3.45	[Ohm.mm ² /m 10 ⁻⁴ Ohm.inch ² /ft]
Modulus of elasticity	200 29.01	[10 ³ N/mm ² 10 ³ ksi]

Thermal Expansions between 20°C | 68°F and ...

Temperature (°C °F)	100 212	200 392	300 572	400 752	500 932	600 1,112
Thermal expansion (10 ⁻⁶ m/(m.K) 10 ⁻⁶ inch/inch. °F)	16 8.9	16.5 9.2	17 9.4	17.5 9.7	18 10	18.5 10.3

The data contained in this brochure is merely for general information and therefore shall not be binding on the company. We may be bound only through a contract explicitly stipulating such data as binding. Measurement data are laboratory values and can deviate from practical analyses. The manufacture of our products does not involve the use of substances detrimental to health or to the ozone layer.