# CORROSIONS-RESISTANT STEELS - AUSTENITIC STEELS AND NON MAGNETIC STEELS

## Available Product Variants

Plates

## Product Description

Aviation and aerospace industries, e.g.: washers

## Applications

- Other Aerospace Components
- Structural parts (Aerospace)

## Technical data

| Material designation | |
|---|---|
| Alloy 321 | Market grade |
| 1.4544 | SEL |
| 1.4541 | |
| 1.4878 | |
| X6CrNiTi18-10 | EN |
| X12CrNiTi18-9 | |
| S32100 | UNS |
| S32109 | |
| 321 | AISI |
| 321H | |
| SUS321 | JIS |

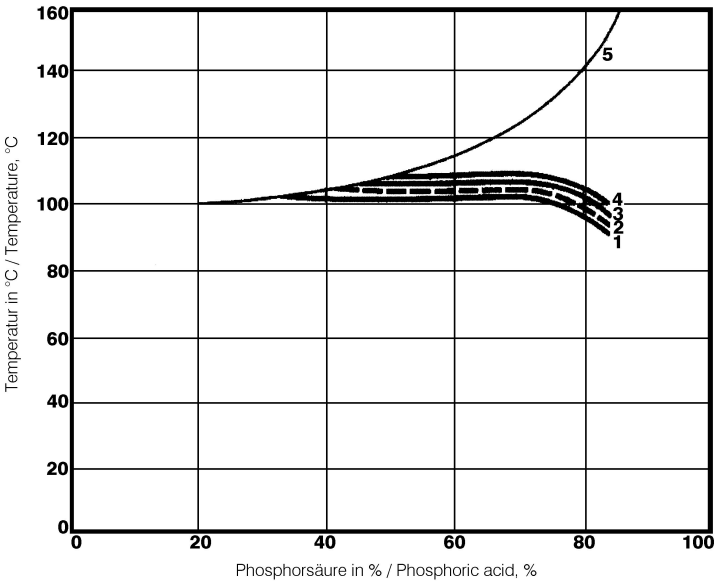
| Standards | |
|---|---|
| 5510 | AMS |
| 5645 | |
| 5689 | |
| S524 | BS |
| S526 | |
| 321S31 | |
| ~S129 | |
| S526 | |

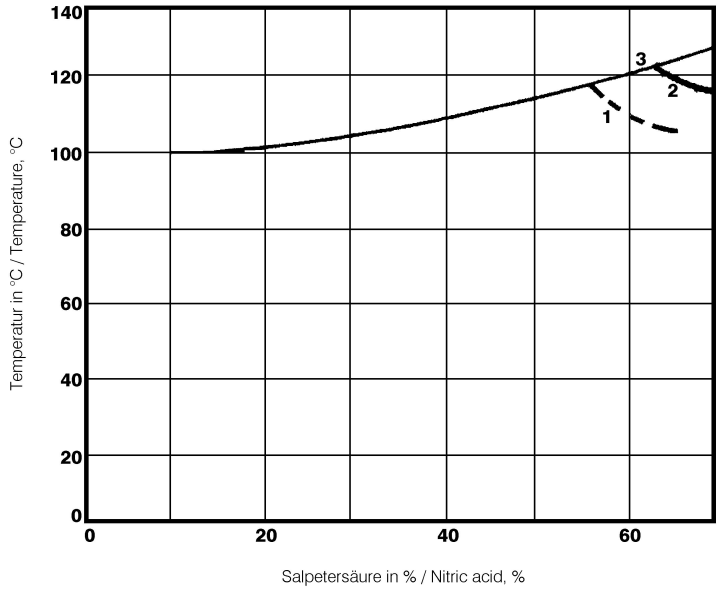
## Chemical composition (wt. %)

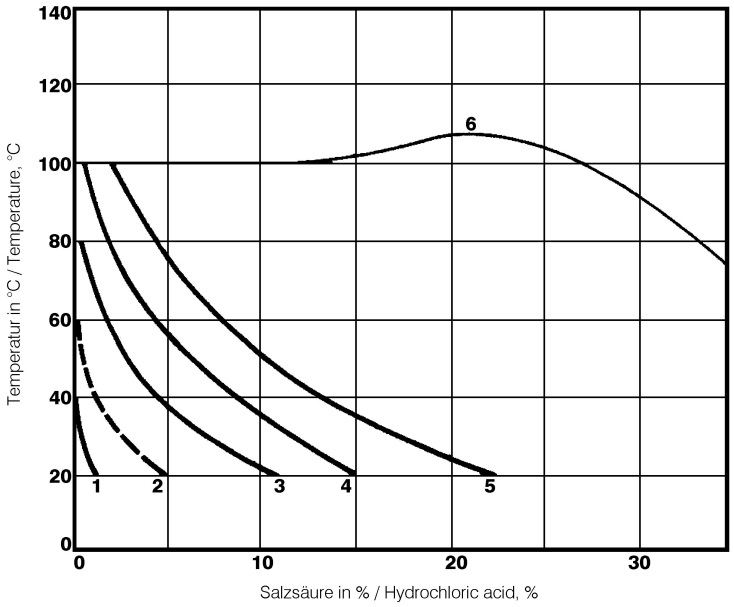
| C | Si | Mn | Cr | Ni | Ti |
|---|---|---|---|---|---|
| 0.03 | 0.5 | 1.7 | 17.5 | 9.7 | ≥ 5xC |

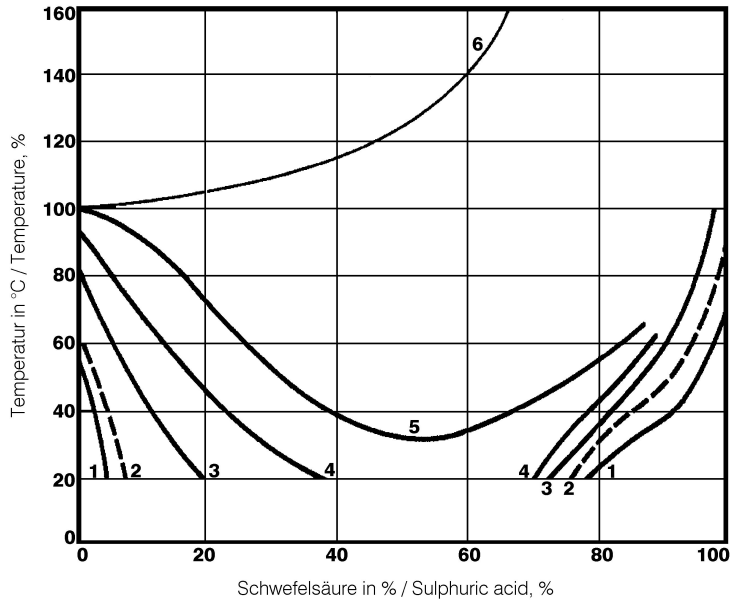
## Heat treatment

| Solution annealing | | |
|---|---|---|
| Temperature | 1,020 to 1,120 °C | Water, air (thickness below 2 mm) |


Temperatur in °C / Temperature, °C
160
140
120
100
80
60
40
20
0
0
20
40
60
80
100
Phosphorsäure in % / Phosphoric acid, %
5
4
3
2
1


Temperatur in °C / Temperature, °C
140
120
100
80
60
40
20
0
0
20
40
60
Salpetersäure in % / Nitric acid, %
3
2
1


Temperatur in °C / Temperature, °C
140
120
100
80
60
40
20
0
0
10
20
30
1
2
3
4
5
6
Salzsäure in % / Hydrochloric acid, %


Temperatur in °C / Temperature, %
160
140
120
100
80
60
40
20
0
0
20
40
60
80
100
1
2
3
4
5
6
Schwefelsäure in % / Sulphuric acid, %

## Physical Properties

| | | |
|---|---|---|
| Density | 7.9 | [kg/dm³] |
| Thermal conductivity | 15 | [W/(m.K)] |
| Specific heat | 500 | [kJ/kg K] |
| Spec. electrical resistance | 0.73 | [Ohm.mm²/m] |
| Modulus of elasticity | 200 | [10³N/mm²] |

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

| **Temperature (°C)** | **100** | **200** | **300** | **400** | **500** | **600** |
|---|---|---|---|---|---|---|
| Thermal expansion ($10^{-6}$ m/(m.K)) | 16 | 16.5 | 17 | 17.5 | 18 | 18.5 |



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ONE STEP AHEAD.