



STAPPERT

1.4876

## First choice for high temperature apparatus engineering

Material datasheet for **1.4876** | Alloy 800 / 800H / 800HT | X10NiCrAlTi32-21

The material 1.4876 or Alloy 800 is an austenitic nickel-chromium alloy with **good corrosion resistance and heat resistance**. This material also has good resistance against oxidising, reducing and corrosive media and good processability.

Due to these properties, the material 1.4876 is preferably used in apparatus engineering, power plant construction and furnace design as well as in the chemical and petrochemical industries.

For temperatures up to approx. 600°C, 1.4876 is used; for temperatures above 600°C, the annealed version 1.4876H or Alloy 800H / HT can be used.

### WELDING

The material 1.4876 is easy to weld using conventional welding methods. These include TIG, MIG or manual arc welding.

### MACHINING

Machining should be carried out in the annealed condition. The material 1.4876 tends to be work-hardened.

### AVAILABLE DIMENSIONS

Round bars:

20, 25, 30, 40, 50, 60, 70, 80 and 100mm



### APPLICATIONS

- Apparatus engineering
- Power plant construction
- Furnace design
- Chemical industry
- Petrochemical industry
- Hydropower industry

## MECHANICAL PROPERTIES UNDER HIGH TEMPERATURES

Tensile strength value	Delivery state	Temperature °C			
		100	200	300	400
Rp0.2	solution annealed	≥185	≥160	≥145	≥130

## MECHANICAL PROPERTIES AT ROOM TEMPERATURE

Stated values apply to bar steel up to 160 mm max.  
(EN 10095)

### Heat treatment condition:

solution annealed

### Yield strength Rp0.2 (N/mm<sup>2</sup>):

at least 170

### Tensile strength Rm (N/mm<sup>2</sup>):

450 - 680

### Elongation at fracture A5 (%):

min. 30

## HEAT TREATMENT

### Solution annealing:

1050 - 1150 °C /

Cooling: water

## CHEMICAL ANALYSIS

Chem. Element	1.4876	
	min.	max.
Ni	30.0	34.0
Cr	19.0	23.0
Al	0.15	0.60
Ti	0.15	0.60
Al+Ti	0.30	1.20
C	-	0.12
Si	-	1.0
Mn	-	2.0
P	-	0.030
S	-	0.015

## STAPPERT Deutschland GmbH

Willstätterstraße 13 · 40549 Düsseldorf

T +49 211 5279-0 · F +49 211 5279-177

deutschland@stappert.biz · deutschland.stappert.biz



INOX INTELLIGENCE.

**Note:** All information regarding material properties, recommendations for use of the material, and available delivery configurations have been carefully researched, and is provided according to the best of our knowledge. However, no guarantee is made for the information provided. In the case of orders, all information and data must always be agreed in a separate written agreement.