

# Stainless Steel Alloy 1.4923



## Metal Alloys

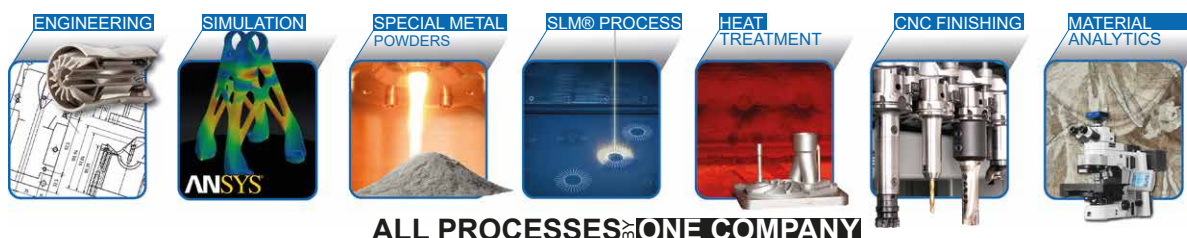
for Additive Manufacturing

### ALTERNATIVE NAMES:

X22CrMoV12-1

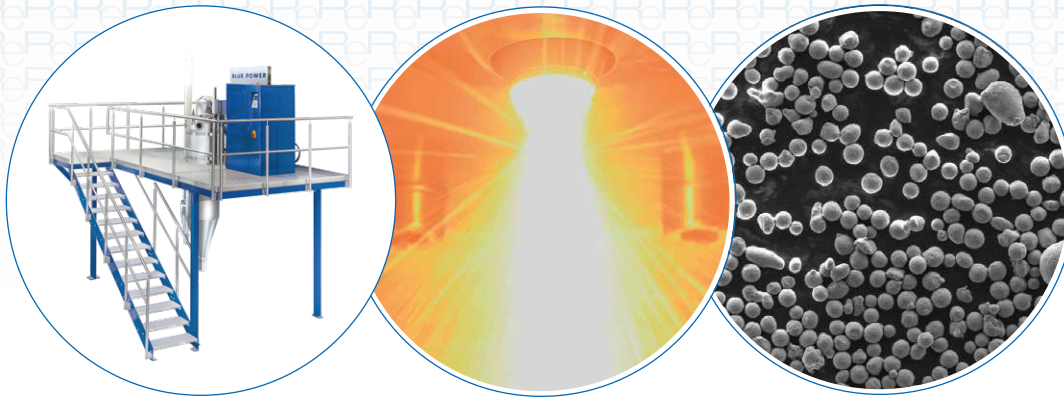
Properties	Unit	Heat-treated <sup>1)</sup>
Tensile Strength $R_m$	MPa	1400 ±30
Yield Strength $R_{p0,2}$	MPa	1300 ±30
Elongation at Break $A_5$	%	14 ±2
Young's Modulus E	GPa	210 ±5
Hardness	HV	53 ±1 (as printed)

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## Material characteristics

The high-temperature resistant chromium steel 1.4923 can be used for temperatures up to 580 °C. In addition, the material has a good resistance against corrosion. Thus, it is frequently used for steam turbine parts and chemical applications. Because of the limited weldability, thermal conditions during additive manufacturing and heat treatment processes need to be considered carefully.

### CHEMICAL COMPOSITION

Element	Mass Fraction [%]
Fe	Balance
Cr	11.00 - 12.50
Mo	0.80 - 1.20
C	0.18 - 0.24
Ni	0.30 - 0.80
Mn	0.40 - 0.90
Si	≤ 0.50
P	≤ 0.015
S	≤ 0.015

### MICROSECTION



1) The specified material properties were determined at room temperature. They are multi-dimensionally dependent on many different machine and process parameters. Without further investigation, the material properties do not constitute a sufficient basis for component dimensioning.

Specific heat treatment processes lead to optimized mechanical-technological properties to meet the component requirements.