

Material data sheet

Bars in grade

1.4122

Designation:

EU
1.4122
X39CrMo17-1

Chemical composition (wt %):

C: max. 0,33-0,45 %
Mn: max. 1,50 %
P: max. 0,040 %
S: max. 0,030 %
Si: max. 1,00 %
Cr: 15,5-17,5 %
Ni: max. 1,00 %
Mo: 0,80-1,30 %

Basic properties:

Density:	7,7 g/cm ³	Ferromagnetic steel
Thermal conductivity:	29 W/m/K	Electrical resistance: 650 μΩ.mm (20°C)

Mechanical properties:

Condition	Rp0,2 (MPa)	Rm (MPa)	A (%)	Z(%)
Annealed	-	max. 900	-	-
Q750	min. 550*	750-950	min. 12*	-

*The values marked in this way are only informative typical values, which are not specified in the standard.

Other properties:

Corrosion resistance (note: it should be taken into account that corrosion resistance is influenced by many factors and that it is a typical corrosion resistance that may vary due to the specific influences acting on the steel)

Nitric acid	usable with caution
Phosphoric acid	bad
Sulphuric acid	bad
Acetic acid	good
Sodium carbonate	usable with caution
Sodium chlorite	usable with caution
Humidity	good
Sea water	limited use

Treatment:

Machining	+
Automatic machining	++
Forging	+
Cold forming	+
Polishing	+++
Welding	0/+ (under strict conditions, e.g. elevated temperature followed by annealing)

Delivered tolerances:

Rolled descaled bars

k13

Cold finished bars (drawn, turned, ground)

f,g,h 6-11

Typical applications:

- Construction of machinery and equipment
- Pumps, compressors
- Shafts, studs
- Automotive
- Engineering
- Construction industry