

X10CrNi18-8 (1.4310)

Material Designations

1.4310	DIN
S30200	UNS
301	AISI

Standards

DIN EN 10088-3
DIN EN 10270-3
DIN EN 10263-5

Chemical Composition Mass-%

	C	Si	Mn	P	S	Cr	Ni	Mo	N
min.	0,05	-	-	-	-	16,0	6,0	-	-
max.	0,15	2,0	2,0	0,045	0,015	19,0	9,5	0,8	0,1

Customer specific restrictions upon request.

Properties

1.4310 is an austenitic Cr-Ni steel with good corrosion resistance (PREN ≈ 18). The formation of chromium-depleted areas as a result of additional heat treatment beyond the as-supplied condition creates a risk of intergranular corrosion.

Polishing the surface achieves the best possible corrosion resistance.

During cold forming, the material work-hardens through the transformation of metastable austenite into martensite; this reduces its resistance to corrosion.

Delivery Condition

✂ solution annealed (+AT)

Application Area

Used in the cold-formed state in spring components with operating temperatures of up to 300 °C.

Typical Applications

- ✂ Spring components
- ✂ Clamping springs (electrical industry)
- ✂ Food industry
- ✂ Stamped and deep-drawn parts

Quality

- ISO 9001
- ISO 14001
- ISO 50001
- Approvals acc. to standards like ABS, BV, DNV ...
- Customer specific approval certificates

Innovation

- Fully automated ultrasonic testing up to dia. 1000 mm
- CO₂-reduction by innovative heat treatment solutions

Flexibility

- Product range from fine wire to forging
- Directly from stock close at hand

Individuality

- Dimensions
- Tolerances
- Surface qualities
- Delivery conditions

Mechanical Properties acc. to DIN EN 10088-3

Diameter [mm]	Yield strength [N/mm ²]	Tensile strength [N/mm ²]	Elongation [%]	Hardness [HBW]
≤ 40	≥ 195	500 - 750	≥ 40	≤ 230

Heat Treatment Guideline values acc. to DIN EN 10088-3

	Temperature [°C]	Cooling medium
Solution annealing (+AT)	1000 - 1100	Water, air

BGH Edelstahlwerke GmbH

Am Stahlwerk 1
01705 Freital
+49 351 646-0
www.bgh.de

