STAINLESS STEEL AISI 301

DIN	En Nr.	UNS (ASTM)	AISI
X10CrNi18-8	1.4310	S30100	301

Chemical composition (Weight %)	Fe	C	Cr	Ni	Si	Mn	P	S	Mo	N
	Balance	0.05-0.15	16.0-19.0	6.0-9.5	≤ 2.0	≤ 2.0	≤ 0.045	≤ 0.015	≤ 0.80	≤ 0.110

Main technological properties

The 1.4310, X10CrNi18-8, is the most widely used stainless steel for the production of springs. It reaches very high mechanical strength through cold working. Its austenitic structure is rather unstable and its corrosion resistance is lower than, for example, that of the 1.4435, 316L, or of the 1.4301, X5CrNiMo 18- 10. An increase of the mechanical strength of the 1.4310, X10CrNi18-8, by more than 250 N/mm2 can be achieved by tempering at 280 to 420°C after having been highly cold worked. This tempering is interesting in that it also increases the fatigue strength limit .

Typical dimensions	Thickness (mm)	Width (mm)	Length (mm)
Strip in coil	0.05 – 1.00	300	-
Strips in sheet	-	-	-

Mechanical properties	Temper	Rm (N/mm2)	Rp (N/mm2)	A50mm (%)	Hv
	hard	1500-1800			410-520
	extra hard	≥ 1700			≥ 450

Color

gray

Typical usage

AISI 301 is mainly used for the

- springs
- connector components
- electric switch blades
- watch components,
- certain types of knives

Surface

Special surface qualities upon request

Flatness

Special requirement on the longitudinal or transversal flatness upon request

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