

STAINLESS STEEL AISI 301

DIN X10CrNi18-8	En Nr. 1.4310	UNS (ASTM) S30100	AISI 301							
Chemical composition (Weight %)	Fe Balance	C 0.05-0.15	Cr 16.0-19.0	Ni 6.0-9.5	Si ≤ 2.0	Mn ≤ 2.0	P ≤ 0.045	S ≤ 0.015	Mo ≤ 0.80	N ≤ 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/mm ² 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 hard extra hard	Rm (N/mm ²) 1500-1800 ≥ 1700		Rp (N/mm ²)		A50mm (%)		Hv 410-520 ≥ 450		
Color	gray									
Typical usage	AISI 301 is mainly used for the <ul style="list-style-type: none"> ✓ 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									

