



CHRONIFER®
Special FM
austenitic
Stainless Steel

Material No.	DIN Abbreviation	AFNOR	AISI/SAE/ASTM	ISO	Euro Standard EN	Others
1.4310	X10CrNi18-8 (former X12CrNi17-7)	X10CrNi18-8 (former Z 11 CN 17.08) (former Z 11 CN 18.08) (former Z 12 CN 18.09)	AISI ~ 301/ AISI 302 ASTM F899	X10CrNi18-8	X10CrNi18-8 10088-1	NF S 94-090 JIS ~ SUS 301

Distinctive feature & main attribute: a rust- and acid-proof chromium-nickel-spring-steel alloy whose average tensile strength can be increased considerably by cold rolling. If cold worked this alloy is applicable to welding with a good fatigue resistance.

Use & application range: this alloy's typical areas include vehicle plates and springs, connector or watch components, knives, electric switch blades, precision foils etc.

REFERENCE ANALYSIS %	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	N	Fe
	0.05 0.15	max. 1.00	max. 2.00	max. 0.045	max. 0.015	17.00 19.00	max. 0.80	8.00 8.50	max. 1.00	max. 0.10	balance

EXECUTION DELIVERY FORM STANDARD SIZES AVAILABILITY	<ul style="list-style-type: none"> • Size in 3 m (2 m) round bars as well as in coils for Escomatic • Standard size in stock: see Product range • Other sizes on request
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TOLERANCES	<ul style="list-style-type: none"> • $\varnothing < 2.00$ mm, cold drawn, polished, ISO h8 • $\varnothing \geq 2.00$ mm, cold drawn, ground, polished; ISO h7 (h6); surface finish Ra 0.4 (N5) • Tighter tolerances on request
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MECHANICAL PROPERTIES	At delivery status (in cold worked condition): <ul style="list-style-type: none"> • Tensile strength (R_m) spring temper according to DIN 17224: 1350 – 2000 MPa, size depending
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HEAT TREATMENT	<ul style="list-style-type: none"> • Soft annealing: 1050 °C, cooling in water • Hardening and tempering by heat treatment is impossible unless by cold working
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CUTTING RATES	<ul style="list-style-type: none"> • $v_c \sim 15 - 25$ m/min, value depending on the lubrication oil, cutting tools and shape of parts. • Cutting oil: e.g. ORTHO NFX of Motorex
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