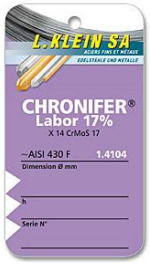

CHRONIFER®
Labor 17 %
ferritic
Hardenable Stainless Steel

Material No.	DIN Abbreviation	AFNOR	AISI/SAE/ASTM	ISO	Euro Standard EN	Others
1.4104	X14CrMoS17 (former X 12 CrMoS 17)	X14CrMoS17 (former Z 13 CF 17)	AISI ~ 430F	X14CrMoS17	X14CrMoS17 10088-3	SIS 2383 JIS ~ SUS 430F

Distinctive feature & main attribute: a non-corroding hardenable chromium steel, showing good corrosion resistance to water and steam and even lightly alkali medias if well-composedly alloyed. It can be tempered because of its low carbon content unless the final part has been polished properly (without pores).

Use & application range: this material meets the requirement of mechanical assembly engineering screws, spindles and axes.

REFERENCE ANALYSIS %	C	Si	Mn	P	S	Cr	Mo	Ni	Fe
	0.10 0.17	max. 1.00	max. 1.50	max. 0.04	0.15 0.35	16.00 17.50	0.20 0.60	max. 0.50	balance

EXECUTION DELIVERY FORM STANDARD SIZES AVAILABILITY	• Execution in 3 m (2 m) round as well as in coils • Standard size in stock: see Product range • Other sizes on request
TOLERANCES	• Ø < 2.00 mm, cold drawn, polished; ISO h8 • Ø ≥ 2.00 mm, cold drawn, ground, polished; ISO h7; surface finish Ra 0.4 (N5) • Ø 2.00, 3.00, 4.00, 5.00, 6.00, 8.00 mm; also in ISO h6 • Tighter tolerances on request
MECHANICAL PROPERTIES	At delivery status: • Tensile strength (R_m): 650 – 850 MPa, size depending • Hardness after tempering: ~ 40 HRC
HEAT TREATMENT	• Tempering in oil: 1000 – 1050 °C • Soft annealing: 800 – 850 °C, 2 – 3 hours cooling in furnace • Stress equalizing & re-crystallization annealing: 700 – 800 °C
CUTTING RATES	v_c ~ 50 – 60 m/min, value depending on the lubrication oil, cutting tools and shape of parts. • Cutting oil: e.g. INOX of Motorex

L. KLEIN SA
Längfeldweg 110
P.O. Box 8358
CH-2500 Biel/Bienne 8

telephone 0041 (0) 32 341 73 73
telefax 0041 (0) 32 341 97 20

www.kleinmetals.ch
info@kleinmetals.ch