

STANDARD REFERENCE:

EN 10088-3: 2005 (Hot-rolled and bright products) | EN 10263-5: 2001 (Wire rods, bars and wire for cold heading products)

RODACCIAI REFERENCES AND COMPARABLE STANDARDS

EUROPE		ITALY	GERMANY		FRANCE	UK	USA
EN 10088-3: 2005 EN 10263-5: 2001		(UNI 6900: 71)	(DIN 17440 - 86)		(NF A 35-574-90)	(BS 970 pt.3 -91)	AISI
Grade	N°		Werkstoff	N°			
X6Cr17	1.4016	X 8 Cr 17	X6Cr17	1.4016	Z 8 C 17	430S17	430

CHEMICAL COMPOSITION (CAST ANALYSIS) (%)

C / max	Si / max	Mn / max	P / max	S / max	Cr
0,08	1,00	1,00	0,040	0,030	16,0÷18,0

MECHANICAL PROPERTIES - Rough turned (1X) in the annealed condition

Size max (mm)	Hardness HB max*	Rp _{0.2} (MPa) min	R _m (MPa)	A ₅ (%) min	Resistance to intergranular corrosion	
					in the delivery condition	in the welded condition
100	200	240	400÷630	20	YES	NO

*only for guidance

MECHANICAL PROPERTIES - Cold drawn (2H, 2B) and ground bars (2G) in the solution annealed condition

Size max (mm)	Rp _{0.2} (MPa) min	R _m (MPa)	A ₅ (%) min*
≤ 10	320	500÷750	8
> 10 ≤ 16	300	480÷750	8
> 16 ≤ 40	240	400÷700	15
> 40 ≤ 63	240	400÷700	15
> 63 ≤ 100	240	400÷630	20

* Values valid only for size ≥ 5 mm

MECHANICAL PROPERTIES - Cold drawn wire and coils (2H)

Tensile strength levels R _m (MPa)	+C 500	+C 650	+C 800	+C900
	500÷700	650÷850	800÷1000	900÷1100

Note: the desired tensile strength level shall be evaluated depending on diameter required

MECHANICAL PROPERTIES - Cold drawn wire and coils in the solution annealed condition (2D)

Size	0,10 ≤ d ≤ 0,20	0,20 ≤ d ≤ 0,50	0,50 ≤ d ≤ 1,00	1,00 ≤ d ≤ 3,00	3,00 ≤ d ≤ 5,00	5,00 ≤ d ≤ 16,00
R _m (MPa) max	900	850	850	800	750	700
A (%) max	10	15	15	15	15	20

 Note: If skin passed, R_m might be increased by up to 50 MPa

MECHANICAL PROPERTIES - Bars, wire and coils for cold heading

Size mm	As Treated (+AT) or Peeled (+AT+PE)		Soft Annealed + Skin Passed (+A +LC)		Cold Drawn + Soft Annealed (+A +C +A)		Cold Drawn + Soft Annealed + Skin Passed (+A +C +A +LC)	
	R _m (MPa) max	Z (%) min	R _m (MPa) max	Z (%) min	R _m (MPa) max	Z (%) min	R _m (MPa) max	Z (%) min
≥2 ≤5	-	-	-	-	560	63	620	61
>5 ≤10	560	63	660	60	560	63	600	61
>10 ≤25	560	63	640	60	560	63	-	-

WORKING TEMPERATURES RECOMMENDED

Operation °C	Hot forgings deformation 800÷1100	Annealing (air) 750÷850

