

STANDARD REFERENCE:

EN 10088-3: 2014 (Hot-rolled and bright products) | EN 10263-5: 2017 (Wire rods, bars and wire for cold heading products)

EN 10272: 2016 (Stainless steel bars for pressure purposes) P.E.D. 2014/68/EU

RODACCIAI REFERENCES AND COMPARABLE STANDARDS

EUROPE		ITALY	GERMANY		FRANCE	UK	USA
EN 10088-3: 2005		(UNI 6900: 71)	(DIN 17440-85)		(NF A 35-574-90)	(BS 970 pt.3 -91)	AISI
Grade	N°		Werkstoff	N°			
X2CrNiMo18-14-3	1.4435	X 2 CrNiMo 17 13	X2CrNiMo18-14-3	1.4435	Z3 CND 18-14-03	316S13	316L

CHEMICAL COMPOSITION (CAST ANALYSIS) (%)

C / max	Si / max	Mn / max	P / max	S / max	N / max	Cr	Mo	Ni
0,030	1,00	2,00	0,045	0,030	0,10	17,0÷19,0	2,50÷3,00	12,5÷15,0

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

Size max (mm)	Hardness HB max***	Rp _{0,2} (MPa) min	Rp ₁ (MPa) min*	R _m (MPa)**	A ₅ (%) min**	KV (J) min	Resistance to intergranular corrosion	
							in the delivery condition	in the welded condition
100	215	200	235	500÷700	40	100	YES	YES

* Only for guidance ** The maximum HB values may be raised by 100HB or the tensile strength value may be raised by 200 MPa and the minimum A% value may be lowered to 20% for bars of ≤35 mm

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*	KV (J) min
≤ 10	400	600÷950	25	-
> 10 ≤ 16	400	600÷950	25	-
> 16 ≤ 40	235	500÷850	30	100
> 40 ≤ 63	235	500÷850	30	100
> 63 ≤ 100	235	500÷700	40	100

* Values valid only for size ≥5 mm

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

Tensile strength levels	+C 600	+C 700	+C 800	+C900	+C 1000	+C 1100	+C 1200	+C 1400	+C 1600
R _m (MPa)	600÷800	700÷900	800÷1000	900÷1100	1000÷1250	1100÷1350	1200÷1450	1400÷1700	1600÷1900

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
Rm (MPa) max	1050	1000	950	900	850	800
A (%) min	20	30	30	30	35	35

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

WORKING TEMPERATURES RECOMMENDED

Operation	Hot forgings deformation	Solution annealing (water, air)
°C	900÷1200	1020÷1120

