STANDARD REFERENCE:
EN 10095: 1999

RODACCIAI REFERENCES AND COMPARABLE STANDARDS

EUROPE		ITALY	GERMANY		FRANCE	UK	USA
EN 10095: 1999		(UNI 6900: 71)	-		(NF A 35-578-91)	(BS 1501 pt. 3-80)	AISI
Grade	**N°**		**Werkstoff**	**N°**			
X8CrNi25-21	1.4845	X 22 CrNi 25 20	–		Z 8 CN 25 - 20	310S16	310 S

CHEMICAL COMPOSITION (CAST ANALYSIS) (%)

C / max	Si / max	Mn / max	P / max	S / max	N / max	Cr	Ni
0,10	1,50	2,00	0,045	0,015	0,11	24,0÷26,0	19,0÷22,0

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

Size max (mm)	Hardness HB max* **	$Rp_{0,2}$ (MPa) min** ***	$Rp_{1,0}$ (MPa) min** ***	R_m (MPa)	A_5 (%) min***
100	192	210	250	500÷700	35

*only for guidance **for rods, only the tensile strength values apply
*** the maximum HB values may be raised by 100HB or the tensile strenght 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 wire and coils (2H)*

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

*for reference only
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

*for reference only
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	950÷1200	1050÷1150

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MECHANICAL PROPERTIES - Bars, wire and coils for cold heading*

Size max (mm)	As Treated (+AT) or Peeled (+AT+PE)		Cold Drawn (+AT +C)		Cold Drawn + Solution annealed (+AT +C +AT)		Cold Drawn + Solution annealed + Skin passed (+AT +C +AT +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	-	-	-	-	670	68	720	63
5÷10	650	68	780	-	650	68	700	63
10÷25	650	68	750	-	650	68	-	-
25÷50	650	68	-	-	-	-	-	-

*for reference only