Rebarinox®

ACERINOX	ROLDAN
ACX 903	
DESIGNATION ASTM	A789

DESCRIPTION:

Grade ACX 903 is an austenite-ferrite stainless steel (duplex). Thanks to this structure it combines excellent corrosion resistance with really interesting mechanical properties. Its low alloy content (lean duplex) makes it more affordable than other duplex grades while offering in many cases, a similar behavior. Due to that fact it is highly appreciated by civil engineers for long-term execution works.

CHEMICAL COMPOSITION:

ACX 903	C	Mn	P	S	Si	Cr	Ni	Mo	N	Cu
EN 1.4482	≤0.030	4.0 - 6.0	≤0.035	≤0.030	≤1.00	19.5 - 21.5	1.5 - 3.5	0.1 - 0.6	0.05 - 0.20	≤1
UNS S32001	≤0.030	4.0 - 6.0	≤0.040	≤0.030	≤1.00	19.5 - 21.5	1.0 - 3.0	≤0.60	0.05 - 0.17	≤1
ACX903 Standard	0.020	4.20	0.025	0.01	0.650	20	1.8	0.2	0.11	0.3

MECHANICAL PROPERTIES TABLE:

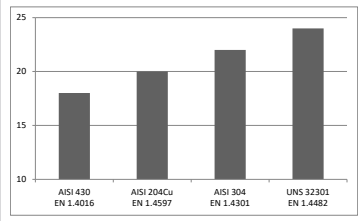
Roldan Stardard Property/ International Standars:

GUIDELINE TO ROLDAN PRODUCTS MECHANICAL PROPERTIES	0.2 Yield Strength (MPa)	Tensile Strength (MPa)	Elongation (%)	Hardness (HB)
Reinforcement (3 - 50 mm)	500- 650	700- 850	40- 50	210- 250
Wire rod (5,5 - 41,5 mm)	400- 550	750- 850	40- 50	210- 240
ASTM A-240- A-789	≥ 450	≥ 620	≥ 25	≤ 290
EN 10088-3(1)	≥ 400	≥ 650	≥ 25	--
BS 6744(2)	≥ 500	≥ 550	14	--

CORROSION RESISTANCE:

- Similar characteristics to AISI 304 type.
- Corrosion resistance improve under tensions compared with AISI 304L types.

PRE (Pitting Resistance Equivalent)



PRE = (% Cr) + 3,3. (%Mo) + X. (%N)
Austenitics: X = 16
Duplex: X = 30

MECHANICAL PROPIERTIES:

- Yield strength and tensile strength are higher than on the AISI 430/304 types.

Mechanical properties according to standard EN10088

EN	Grade (equivalent)	Re 0,2% min. N/mm² (Yield strength)	Rm min. N/mm² (Tensile strength)	A5 Mini.% (Elongation)
1.4016	430	240	400	20
1.4301	304	190	500	45
1.4482(1)	UNS 32001	400	650	25

APPLICATIONS:

- In the same applications of AISI 304/304L type.
- Pulp & Paper Industry.
- Higher ductility to a higher temperatures.
- Similar machinability of AISI 304.
- Structural.
- Oil drilling platform.

WELDING:

- Less sensitive to hot cracking due to duplex structure.
- Recommendation EN 1.4462

STANDARDS:

XP A35-014	UNE 36067	BS 6744	ASTM A955	TC 104WI EC104031:2016

(1) Steel type within EN 10088 REVIEWS.
(2) Material fulfills BS6744 according to CARES Technical Approval TA13-5037