



AUSTENITIC STAINLESS STEEL Roldamax® - ACX 229	
EN DESIGNATION	AISI EN DESIGNATION
1.4307	304L
X2CrNi18-9	



DESCRIPTION ACX 229 is part of the Roldamax® steel grade series. This specific steel grade was developed based on steel grade AISI 304L. Roldan applied its long products production expertise in order to reach all of 304L's properties, as well as the improved machinability that the entire Roldamax® steel grade series offers.

CHEMICAL COMPOSITION

C	Si	Mn	P	S	N(ppm)	Cr	Cu	Mo	Ni	Ti
≤0.03	≤0.75	≤2.00	≤0.045	0.020-0.030	≤1000	18.00-18.30	-	-	8.00-8.50	-

APPLICATIONS

ACX 229, one of Roldan's Roldamax® high machinability steel grades, is used in any element that requires specific properties for its machinability:

- Shafts
- Nuts
- Bolts
- Gears
- Hubs
- Accessories for the automotive and the aerospace industries.

MECHANICAL PROPERTIES EN 10088-3

	Diam.	Rp _{0,2} (MPa)	Rm (MPa)	Elongation (%)	Hardness (HB)
Wire Rod	≤160	≥175	500-700	≥40	≤215
Hot rolled bar	≤160	≥175	500-700	≥40	≤215
Cold rolled bar	<10	≥400	600-930	≥25	-
	10<Ø≤16	≥380	600-930	≥25	-
	16<Ø≤40	≥175	500-830	≥25	-
	40<Ø≤63	≥175	500-700	≥30	-
	63<Ø≤160	≥175	500-700	≥45	-

PHYSICAL PROPERTIES EN 10088-1

Elastic modulus	Thermal expansion average coefficient (20°C-100°C)	Thermal conductivity	Electrical restivity	Density
200 Gpa	16 µm/m°C	15 W/m·k	0.47 Ω·mm ² /m	7.9 kg/dm ³

WELDING

The consumables recommended are the following:

Covered electrodes	Wires and rods	Hollow electrodes
E 19 9 L 308L	G 19 9 L (GMAW) W 19 9 L (GTAW) P 19 9 L (PAW) S 19 9 L (SAW) 308L	T 19 9 L 308L

MACHINABILITY

The addition of sulphur is employed to improve the machinability of Roldamax® steel grades, achieving a longer tool lifespan, higher machining speed and a better chip.

INTERGRANULAR CORROSION

Due to its low C content (≤ 0,03%), ACX 229 is less sensitive than ACX 109 to suffer intergranular corrosion.



Roldamax® - ACX 229 | AUSTENITIC STAINLESS STEEL



CORROSION RESISTANCE

Austenitic stainless steels of family Cr-Ni present good corrosion resistance features in numerous applications. In example, these steel grades present corrosion speeds lower than 0,10mm/year in the following environments:

- Acetic acid 20% at 80°C.
- Formic acid 90% at 20°C.
- Phosphoric acid 20% at 60°C.
- Nitric acid 20% at 50°C.
- Sulphuric acid 90% at 20°C

SPECIFICATIONS

It can be supplied in accordance with requirements of standards 10088-3 & ASTM A-479 "Condition: Annealed", and ASTM 276 "Condition: Annealed".

CERTIFICATES



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