



AUSTENITIC STAINLESS STEEL ACX 296	
EN DESIGNATION	AISI DESIGNATION
1.4541	AISI 321
X6CrNiTi18-10	



**DESCRIPTION** | ACX 296 belongs to the Cr-Ni austenitic steel range. These steel grades are the most versatile of the market, making them appropriate for numerous applications. Specifically, these steel grades present a good corrosion resistance and a good performance when forging and welding. Being titanium stabilized offers a better intergranular corrosion resistance that allows it to be used in sensitization temperature

**CHEMICAL COMPOSITION**  
ASTM A276

C	Si	Mn	P	S	N(ppm)	Cr	Cu	Mo	Ni	Ti
≤0.08	≤1.00	≤2.00	≤0.045	≤0.030	-	17.00-19.00	-	-	9.00-12.00	5x(C+N) a 0.70

**APPLICATIONS**

- Tubes
- Welded structures
- Aerospace industry
- Electric resistances
- Vehicles exhaust system

**MECHANICAL PROPERTIES**

		Rp <sub>0,2</sub> (MPa)	Rm (MPa)	Elongation (%)	Hardness (HB)
EN 10088-3	Wire rod	≥190	500-700	≥40	≤215
	Bar	≥190	500-950	≥25	-
ASTM A-479	Bar	≥205	≥515	≥30	-

**PHYSICAL PROPERTIES**  
EN 10088-1

Elastic modulus	Thermal expansion average coefficient (20°C-100°C)	Thermal conductivity	Electrical resistivity	Density
200 Gpa	16 μm/m°C	15 W/m·k	0.73 Ω·mm <sup>2</sup> /m	7.9 kg/dm <sup>3</sup>

**WELDING**

Covered electrodes	Wires and rods	Hollow electrodes
E 19 9 Nb	G 19 9 L (GMAW) W 19 9 L (GTAW) P 19 9 L (PAW) S 19 9 L (SAW)	T 19 9 L
308L	308L	308L
347	347	347

**INTERGRANULAR CORROSION** | As ACX 296 is stabilized with titanium, it is less sensitive than our ACX 125 to intergranular corrosion, thus allowing a continued use in the sensitization temperature range of the material (550°C to 850°C) and in operations that entail a slow cooling within this temperature range.

**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



ACX 296 | AUSTENITIC STAINLESS STEEL



SPECIFICATIONS

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

CERTIFICACIONES



Sistema de Gestión  
 ISO 9001:2015  
 ISO 14001:2015  
 ISO 50001:2018



www.tuv.com  
 ID 0091003143



Disclaimer

The material contained in this manual has been designed as a guide for customers at Acerinox, S.A.. However, the material contained herein is not intended as a substitute for any person's procedures and should not be used or relied upon for any specific or general application without first obtaining competent advice. Furthermore, Acerinox, S.A. disclaims any responsibility for the suitability of the stainless steel in question for any particular purpose or for the performance or selection of the stainless steel, unless Acerinox, S.A. specifically and expressly authorises the purpose or selection. The material contained in this manual does not purport to be a comprehensive or exhaustive statement of all relevant material applicable to special and general stainless steel products and no representation, condition or warranty, express or implied, is given by Acerinox, S.A. as to the accuracy or completeness of this manual and, so far as is permitted by law, Acerinox, S.A., its members, staff and consultants disclaim any duty of care in relation to the preparation of this manual and the information that it contains and shall not be liable for any direct, indirect or consequential loss, damage or injury suffered by any person, howsoever caused as a result of relying on any statement in or omission to this manual and any such liability is expressly disclaimed. [Acerinox, S.A. shall not be liable in the event of a breakdown, malfunction or failure occurring due to faulty design, material or workmanship of the stainless steel, whether based on the information contained herein or not, and shall not, under any circumstances, be liable for any damages, either direct or indirect, particularly consequential damages, including but not limited to damages for loss of profits.]