



AUSTENITIC STAINLESS STEEL ACX 060	
EN DESIGNATION	ASTM DESIGNATION
1.4372	201
X12CrMnNiN17-7-5	S20100

DESCRIPTION ACX 060 is a Cr-Ni-Mn austenitic stainless steel. It is an alternative to austenitic steels such as ACX 120 but with less nickel content, to be used in moderate corrosive applications. Its austenitic structure is ensured by the addition of nitrogen and manganese.

CHEMICAL COMPOSITION

C	Si	Mn	P	S	Cr	Ni	N
≤0.120	≤0.75	5.50-7.50	≤0,045	≤0.015	16.00-18.00	3.50-5.50	0.05-0.15

APPLICATIONS

- Kitchenware
- Catering industry

MECHANICAL PROPERTIES AFTER COLD ROLLING AND FINAL ANNEALING

Rp_{0.2}	≥ 350 N/mm ²
Rm	750 - 950 N/mm ²
Elongation	≥ 45%

PHYSICAL PROPERTIES

At 20°C, it has a density of 7.8 kg/dm³ and a specific heat of 500 J/kg·K

	20°C	100°C	200°C	300°C	400°C	500°C
Modulus of elasticity (GPa)	200	194	186	179	172	165
Mean coefficient of linear expansion between (10⁻⁶ x K⁻¹) and	16	16.2	16.8	17.4	18.2	18.5
Thermal conductivity (W/m·K)	15.5	16	17.3	18.6	20	21.4
Electrical resistivity (Ω·mm²/m)	0.7	-	-	-	-	-

WELDING

Slightly lower weldability than ACX 120. It can be used any welding method. AISI 308L as filler material can be used if necessary. Nitrogen content gases are recommended as protection. The heat-affected zone (HAZ) can be susceptible to intergranular corrosion.

CORROSION RESISTANCE

ACX 060 is linked to basic applications, therefore it has not been necessary a detailed study of its behaviour in different corrosive media. It has less resistance to general corrosion than ACX 120.

PITTING AND CREVICE CORROSION

The resistance to crevice and pitting corrosion of the ACX 060 grade is between the ferritic stainless steel ACX 500 and the austenitic stainless steel ACX 120.

STRESS CORROSION CRACKING

Austenitic stainless steels are susceptible to SCC when presenting tensile residual stresses and being in chlorine media at temperature above 60°C.

ATMOSPHERIC CORROSION

ACX 060 is not recommended in marine and industrial environments. It presents an acceptable behaviour in urban and rural ones, being necessary more frequent cleaning and maintenance than to ordinary austenitic stainless steels.

SURFACE CLEANING

Wash the surface with neutral soap and water applied with a cloth or a brush without scratching the surface. Then, always rinse the stainless steel with water to remove completely the cleaning agent.

SPECIFICATIONS

It can be supplied according to EN 10088-2 and ASTM A-240 standard requirements.