



FERRITIC STAINLESS STEEL ACX 555	
EN DESIGNATION	ASTM DESIGNATION
1.4521	444
X2CrMoTiNb18-2	S44400

**DESCRIPTION** ACX 555 is a low carbon variation of ACX 500 with addition of molybdenum, titanium and niobium. This steel has better pitting and intergranular corrosion resistance than conventional ferritic and austenitic stainless steels. It has good ductility and hardness properties, as well as sensitization resistance in welding works.

**CHEMICAL  
COMPOSITION**

C	Si	Mn	P	S	Cr	Mo	Ti	Nb
≤0.025	≤1.00	≤1.00	≤0.040	≤0.015	17.50-18.50	1.80-2.00	0.12-0.40	0.25-0.50

**APPLICATIONS**

- Food industry
- Heat exchangers and hot water appliances
- Solar panels, kitchenware and automotive elements
- Decoration and architecture

**MECHANICAL  
PROPERTIES AFTER  
COLD ROLLING AND  
FINAL ANNEALING**

<b>R<sub>p0.2</sub></b>	> 320 N/mm <sup>2</sup>
<b>R<sub>m</sub></b>	420 - 640 N/mm <sup>2</sup>
<b>Elongation</b>	min 28%
<b>Hardness</b>	max 217 HB

**PHYSICAL  
PROPERTIES**

At 20°C it has a density of 7.7 kg/dm<sup>3</sup> and a specific heat of 460 J/kg·K

	20°C	100°C	200°C	300°C	400°C	500°C
<b>Modulus of elasticity (GPa)</b>	220	215	210	205	195	-
<b>Mean coefficient of linear expansion between 20°C (10<sup>-6</sup> x K<sup>-1</sup>) and</b>	-	10.4	10.8	11.2	11.6	11.9
<b>Thermal conductivity (W/m·K)</b>	23	24.8	27.3	29.5	31	32
<b>Electrical resistivity (Ω·mm<sup>2</sup>/m)</b>	0.80	-	-	-	-	-

**WELDING**

The recommended consumable electrodes are:

Shielded electrodes	Wires and rods	Hollow electrodes
E 19 12 3 L  316L	W 19 12 3 L (GMAW) W 19 12 3 L (GRAW) P 19 12 3 L (PAW) S 19 12 3 L (SAW) 316L	T 19 12 3 L  316L

**CORROSION  
RESISTANCE**

ACX 555 has better pitting corrosion resistance than conventional ferritic and austenitic stainless steels. Intergranular corrosion resistance is improved by double stabilization (titanium and niobium). It is not sensitive to stress corrosion cracking.

**SURFACE CLEANING**

Wash the surface with neutral soap and water applied with a cloth or a brush without scratching the stainless steel. Then, always rinse the stainless steel with water to remove completely the cleaning agent. Finally, it is recommended to dry the surface to preserve a good superficial condition. In severe environments, a frequent cleaning is strongly recommended.

**SPECIFICATIONS**

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