



FERRITIC STAINLESS STEEL ACX 540	
EN DESIGNATION	ASTM DESIGNATION
1.4513	--
X2CrMoTi17-1	--

DESCRIPTION ACX 540 is a titanium stabilized ferritic stainless steel with molybdenum addition. It exhibits a remarkable combination of high temperature resistance, good forming properties and high resistance to localized corrosion, thanks to the Mo addition. ACX 540 is an alternative to AISI 304 in shaped components used in medium-severe environments.

CHEMICAL COMPOSITION

C	Si	Mn	P	S	Cr	Mo	Ti
≤0.025	≤1.00	≤1.00	≤0.040	≤0.015	16.00-18.00	0.80-1.40	0.30-0.60

APPLICATIONS

- Exhaust systems
- Tubes
- Household electrical appliances

MECHANICAL PROPERTIES AFTER COLD ROLLING AND FINAL ANNEALING

Rp_{0.2}	> 220 N/mm ²
Rm	400 - 550 N/mm ²
Elongation	> 23%
Hardness	< 185 HB

PHYSICAL PROPERTIES

At 20°C it has a density of 7.7 kg/dm³ and a specific heat of 460 J/kg·K

	20°C	100°C	200°C	300°C	400°C	500°C
Modulus of elasticity (GPa)	220	215	210	205	195	-
Mean coefficient of linear expansion between 20°C (10⁻⁶ x K⁻¹) and	-	10	10.5	10.5	10.5	11
Thermal conductivity (W/m·K)	25	-	-	-	-	-
Electrical resistivity (Ω·mm²/m)	0.70	-	-	-	-	-

WELDING

The recommended consumable electrodes are:

Shielded electrodes	Wires and rods	Hollow electrodes
E 23 12 L	W 23 12 L (GTAW)	T 23 12 L
ER 308L	P 23 12 L (PAW)	308L
2R 316L	S 23 12 L (SAW)	ER 316L
	ER 308L	
	ER 316L	

CORROSION RESISTANCE

ACX 540 has good pitting corrosion resistance by hydrochloric, due to the addition of Cr and Mo, which makes it suitable for some typical AISI 304 applications. It is resistant to industrial environments and can withstand the condensation in the exhaust systems.



ACX 540 / FERRITIC STAINLESS STEEL

OXIDATION RESISTANCE

ACX 540 exhibits good resistance to oxidizing sulphur-free environments up to 950°C.

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-480/A-480M standard requirements.