



FERRITIC STAINLESS STEEL ACX 800	
EN DESIGNATION	ASTM DESIGNATION
1.4512	409L
X2CrTi12	S40910

DESCRIPTION ACX 800 is a titanium stabilized ferritic stainless steel. It exhibits good high temperature oxidation resistance and good corrosion resistance in low corrosive media. Because of the titanium addition and the low carbon and nitrogen content, this steel shows good forming and weldability.

CHEMICAL COMPOSITION	C	Si	Mn	P	S	Cr	Ti
	≤0.030	≤1.00	≤1.00	≤0.040	≤0.015	10.50-12.50	[6(C+N)] a 0.5

APPLICATIONS

- Exhaust systems: muffler, catalytic converter
- Tubes

MECHANICAL PROPERTIES AFTER COLD ROLLING AND FINAL ANNEALING	Property	Value
	Rp_{0.2}	>220 N/mm ²
	Rm	380 - 560 N/mm ²
	Elongation	> 25%
	Hardness	< 170 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	-	10.5	11	11.5	12	12
Thermal conductivity (W/m·K)	25	26	27	28	28.5	28.7
Electrical resistivity (Ω·mm²/m)	0.60	0.65	0.80	0.90	1.05	1.10

WELDING The recommended consumable electrodes are the following:

Shielded electrodes	Wires and rods	Hollow electrodes
E 19 9 L ER 308L	G 19 9 L (GMAW) W 19 9 L (GTAW) P 19 9 L (PAW) S 19 9 L ER 208L	T 13 Ti ER 308L

CORROSION RESISTANCE ACX 800 offers mechanical and corrosion resistance better than carbon steels. It also shows adequate oxidation resistance to be used in exhaust systems.

STRESS CORROSION CRACKING As ferritic stainless steel the ACX 800 exhibits good stress corrosion cracking resistance.



HIGH
TEMPERATURE
OXIDATION
RESISTANCE

The maximum scale-breaking temperature for ACX 800 is 800°C in continuous exposure. The maximum working temperature may vary strongly depending on the involved media.

CLEANING SURFACE

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-480M standard requirements.