



MARTENSITIC STAINLESS STEEL ACX 430	
DESIGNATION EN	DESIGNATION ASTM
1.4021	420
X20Cr13	S42000

DESCRIPTION Martensitic stainless steels exhibit an excellent combination of mechanical resistance and hardness by the suitable thermal treatment. Moreover they are ductile and can be a good option for shaping and transformation operations. ACX 360 has good wear resistance and average corrosion resistance.

CHEMICAL COMPOSITION	C	Si	Mn	P	S	Cr
	0.16 - 0.25	≤1.00	≤1.50	≤0.040	≤0.015	12.00-14.00

APPLICATIONS Among others:

- Cutting tools.
- Cutlery.
- Brake discs.
- Automotive industry.
- Dental and surgical instruments.
- Petrochemical and paper industry.
- Hand tools.
- Fittings (clamps, brackets...)

MECHANICAL PROPERTIES AFTER COLD ROLLING AND FINAL ANNEALING	Rm	≤ 700 N/mm ²
	Elongation	≥ 15%
	Hardness	≤ 95 HRB

PHYSICAL PROPERTIES EN 10088-1 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
Modulus of elasticity (GPa)	215	212	205	200	190
Mean coefficient of linear expansion between 20°C (10⁻⁶ x K⁻¹)	-	10.5	11.0	11.5	12.0
Thermal conductivity (W/m·K)	30	-	-	-	-
Electrical resistivity (Ω·mm²/m)	0.65	-	-	-	-

WELDING Only under specialized procedures.

Due to the high hardenability of martensitic stainless steels, welding operations can produce formation of martensite in the welding and heat affected zones. In order to avoid cracking due to the formation of martensite, previous and post heating treatment is recommended.

CLEANING SURFACE It is mandatory to carry out regular cleaning practices to maintain surfaces indefinitely and to obtain the best service of stainless steel.

Wash the surface with neutral soap applied with a soft cloth or a brush without scratching the stainless steel surface. Then, rinse thoroughly to get the complete dirt and cleaner removal. In case of the use of chloride content products, the rinse is mandatory.

Finally, it is recommended to dry surfaces to preserve them in good conditions.

SPECIFICATIONS They can be delivered according to EN and ASTM and comply with the European Directives for:

- Food industry, RE 1935/2004.
- Hexavalent chromium, ROHS.

