



MARTENSITIC STAINLESS STEEL ACX 390	
EN DESIGNATION	ASTM DESIGNATION
1.4031	420
X39Cr13	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 shaped.

**CHEMICAL
COMPOSITION**

C	Si	Mn	P	S	Cr
0.36-0.42	≤1.00	≤1.00	≤0.040	≤0.015	12.50-14.50

APPLICATIONS

- Cutting tools
- High quality knives
- Cutlery

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

Rp_{0.2}	>275 N/mm ²
Rm	max 700 N/mm ²
Elongation	min 20%
Hardness	max 235 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)	215	212	205	200	190	-
Mean coefficient of linear expansion between 20°C (10⁻⁶ x K⁻¹) and	-	10.5	11	11.5	12	-
Thermal conductivity (W/m·K)	30	-	-	-	-	-
Electrical resistivity (Ω·mm²/m)	0.55	-	-	-	-	-

WELDING

ACX 390 is not recommended for welding, since its welds would be fragile and with low corrosion resistance.

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-176 standard requirements. It complies with the European Directives for

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

