1.4057 (AISI 431)

1.4057 is most commonly used in applications where the 12 % chromium steels do not exhibit sufficient resistance to corrosion or when the toughness of the 12 % martensitic stainless steels is not sufficient.

EN 10088-3
1.4057
X17CrNi16-2
AISI 431
JIS 431
DIN 17440

Cr	Mn	Si	C	P	S	Fe	Ni
15,5 - 17,0	max 1,0	max 1,0	0,12 - 0,22	max 0,04	max 0,015	balance	1,5 - 2,5

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density (kg/dm3) 7.70
electrical resistivity at 20 °C (Ω mm2 /m) 0.70
magnetizability yes
thermal conductivity at 20 °C (W/m K) 25
specific heat capacity at 20 °C (J/kg K) 460
thermal expansion (K-1)
20 – 100 °C: 10.0 x 10-6
20 – 200 °C: 10.5 x 10-6
20 – 300 °C: 10.5 x 10-6
20 – 400 °C: 10.5 x 10-6

	Yield Strength (Mpa) (20 C)	Tensile Strength (Mpa) (20 C)	Elongation A5 (%)	Hardness (Vickers)
Annealed	520	< 950	15 - 20	< 290
Qench Hardened	1000	1500	3	430