

Resistant Alloys

Iron-Nickel Alloys



1. Chemical composition

	C	Al	Si	Mn	P	S	Ti	Fe
Mini. %		0.025	0.030	0.030			0.15	
Max. %	0.030	0.07	0.050	0.250	0.007	0.008	0.20	Bal.

2. Physical properties

- Resistivity ($\Omega \text{ mm}^2/\text{m}$) : **≤ 0.04**
- Thermal conductivity (% IACS) : **≥ 39.2**
(100% IACS matches a resistivity of $0.01724 \Omega \text{ mm}^2/\text{m}$)
- Density (g/cm^3) : **8.2**

Standard mechanical properties

- Tensile Strength (daN/mm^2) : **40**
- Elongation (A% on 100 mm) : **≥ 10**

3. Typical Applications

Clad 40 is a copper plated steel that meets ASTM B452 specification. Its copper content provides a good electrical conductivity and allows it to maintain its suitability for tinning. The steel improves the mechanical strength, the electrical weldability and allows the use of electromagnetic handling means. This alloy is especially used for the manufacture of shunts.

April 2012 - The data enclosed in this document are only given as indicative values and correspond to our standard products. Different specific requirements are subject to discussion and formal approval by Aperam Alloys Rescal. For further information or special request, please contact us.