

Corrosion Alloys

Nickel Chromium Alloys



1. Chemical composition

	Ni	Cr	Fe	Cu	Others
Min. %	72.0	14.0	6.0		Mn+,++
Max. %		17.0	10.0	2.0	Mn+,++

2. Physical properties

- Resistivity (Ω mm ² /m)	: 1.03
- Thermal conductivity at 120 °C (Wm ⁻¹ C ⁻¹)	: 14.7
- Coefficient of linear expansion (coeff. 10 ⁻⁶ /°C) from 20 to 100 °C	: 13.3
- Density (g/cm ³)	: 8.43
- Creeping point in	
- at 800 °C	: 25
- at 1 000°C	: 5
- Melting point (°C)	: 1 425
- Maximal operating temperature (°C)	: 1 370

Standard mechanical properties

- Tensile Strength (daN/mm ²)	: 70
- Yield Strength (daN/mm ²)	: 35
- Elongation (A% on 100 mm)	: 30
- Hardness (HV)	: ≥ 220

3. Typical Applications

This Nickel Chromium alloy offers good resistance to oxidation at high temperatures, to stress corrosion cracking generated by chloride ions, to very pure water corrosion and to caustic corrosion.

It is used for furnace components (conveyer belts). It is also used in the equipment of chemical engineering, in the nuclear energy and for the ignition electrodes.

4. International standards

Werkstoff Nr 2.4816 – ASTM B168
UNS N06600 – AMS 5540.

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.