

Resistant Alloys

Copper-Nickel Alloys



1. Chemical composition

| | Ni | Cr | Fe | Cu | Others |
|---|----|----|----|------|--------|
| % | 10 | - | - | Bal. | |

2. Physical properties

| | |
|--|----------------|
| - Resistivity (Ω mm ² /m) | : 0.15 |
| - Temperature coefficient (K x 10 ⁻⁶ /°C) from 20 to 100 °C | : 450 |
| - Thermal conductivity at 120 °C (Wm ⁻¹ C ⁻¹) | : 60 |
| - Coefficient of linear expansion (coeff. 10 ⁻⁶ /°C) from 20 to 100 °C | : 16 |
| - Density (g/cm ³) | : 8.90 |
| - Melting point (°C) | : 1 080 |
| - Maximal operating temperature (°C) | : 400 |

Standard mechanical properties

| | |
|---|---------------|
| - Tensile Strength (daN/mm ²) | : 35 |
| - Yield Strength (daN/mm ²) | : 15 |
| - Elongation (A% on 100 mm) | : ≥ 25 |
| - Hardness (HV) | : |

3. Typical Applications

This alloy presents the particularity to be very malleable, to have a good resistance to corrosion until temperatures of 400°C and a good solderability.

Ideal applications areas are all types of resistances used at low temperature.

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.