

Resistant Alloys

Alloys for low temperature Electric Resistances



1. Chemical composition and brand names

Those are alloys of chemical composition copper & nickel with addition of manganese with a low resistivity (from 0.49 to 0.05 Ohm mm²/m).

Alloys in question are:

CuNi 02 – 06 – 10 – 23 – 44

2. Properties

The best known, CuNi 44 (also called Constantan) has the advantage of a very low temperature coefficient.

CuNi alloys advantages are the following:

- Very good resistance to corrosion
- Very good malleability
- Very good solderability

3. Typical Applications

Principally for the manufacturing of low temperatures electric resistances so as heating cables, shunts, resistances for automobile, they have a maximum operating temperature of 400 °C. They do not therefore intervene in the field of resistances for industrial furnaces.



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.