Alleima® Alloy 400

Tube and pipe, seamless

Datasheet

Alleima® Alloy 400 is a copper-nickel alloy with the following characteristics:

- High strength and toughness
- Good bendability
- Excellent corrosion resistance in many environments

Standards

- UNS: N04400
- W.Nr.: 2.4360

Product standards

- ASTM B163, ASTM B165-05

Chemical composition (nominal)

Chemical composition (nominal) %

C	Si	Mn	S	Ni
≤0.3	≤0.5	≤2	≤0.024	≥63

Others
Cu=30
Fe<2.5

Applications

Alleima® Alloy 400 is used in a wide variety of applications in the chemical, nuclear and oil and gas industries, including heat-exchangers, pumps and valves, reboiler tubes and control lines.

Forms of supply

Alleima® Alloy 400 tubing is supplied in the annealed condition in lengths of 6 m.

Datasheet last updated 1/11/2024 10:32:14 AM (supersedes all previous editions)

Mechanical properties

At 20°C (68°F)

Proof strength		Tensile strength		Elong.
$R_{p0.2}$ [1)]		R_m		A [2)]
MPa	ksi	MPa	ksi	%
≥195	≥28	≥480	≥70	≥40

1 MPa = N/mm^2
1) $R_{p0.2}$ and $R_{p1.0}$ correspond to 0.2% offset and 1.0% offset yield strength, respectively.
2) Based on $L_0 = 5.65 \sqrt{S_0}$ where L_0 is the original gauge length and S_0 the original cross-section area.

Physical properties

Density

8.83 g/cm^3, 0.32 lb/in^3

Thermal conductivity

21.8 W.m -1.°K-1

Specific heat capacity

427 J.kg-1.°K-1

Thermal expansion

13.9 mm/m/°C

Modulus of elasticity

173 GPa

Electrical Resistivity

5.47 µΩ/cm

Datasheet last updated 1/11/2024 10:32:14 AM (supersedes all previous editions)