

Wieland-K36

Cu-OFE

Material designation

EN Cu-OFE
CW009A

UNS –

Chemical composition*

Cu $\geq 99.99\%$

oxygen free
not desoxidized

*Reference values in % by weight

Physical properties*

Electrical conductivity MS/m ≥ 58.6
%ACS ≥ 101

Thermal conductivity W/(m·K) > 394

Thermal expansion coefficient (0–300 °C) $10^{-6}/K$ 17.7

Density g/cm³ 8.94

Modulus of elasticity GPa 127

*Reference values at room temperature

Corrosion resistance

Pure copper and high-copper alloys generally exhibit good corrosion resistance due to their precious character and are practically insensitive to stress corrosion cracking.

Product standards

Rod EN 13604

Wire EN 13601

Section EN 13605

Tube EN 13600

Material properties and typical applications

Wieland-K36 is a very pure, oxygen-free copper with high electrical and thermal conductivity. It is resistant against hydrogen embrittlement.

Because of its high purity Wieland-K36 is suitable for superconductor application. This industry has the highest possible request to the electric properties, which is the guarantee of a high residual resistance ratio RRR.

RRR (293K/4,2K) ≥ 350 for billets

RRR (293K/4,2K) ≥ 350 for wire

Types of delivery

The BU Extruded Products supplies bars, wire, sections and tubes. Please get in touch with your contact person regarding the available delivery forms, dimensions and tempers.

Fabrication properties

Forming

Machinability 20 %
(CuZn39Pb3 = 100 %)

Capacity for being cold worked excellent

Capacity for being hot worked fair

Surface treatment

Polishing
mechanical good
electrolytic excellent
Electroplating excellent

Joining

Resistance welding (butt weld) good

Inert gas shielded arc welding excellent

Hard soldering excellent

Soft soldering excellent

Heat treatment

Melting range 1,083 °C

Hot working 750–900 °C

Soft annealing 250–500 °C
1–3 h

Thermal stress relieving 150–200 °C
1–3 h