wieland

Wieland-K36

Cu-OFE

Material designation

EN	Cu-OFE CW009A
UNS	–

Chemical composition*

Cu	≥ 99.99 %
oxygen free not desoxidized	

**Reference values in % by weight*

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

Physical properties*

Electrical conductivity	MS/m %IACS	≥ 58.6 ≥ 101
Thermal conductivity	W/(m·K)	> 394
Thermal expansion coefficient (0–300 °C)	10^{-6}/K	17.7
Density	g/cm³	8.94
Moduls of elasticity	GPa	127

**Reference values at room temperature*

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 (CuZn39Pb3 = 100 %)	20 %
Capacity for being cold worked	excellent
Capacity for being hot worked	fair

Surface treatment

Polishing mechanical electrolytic	 good excellent
Electroplating	excellent

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.

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

Product standards

Rod	EN 13604
Wire	EN 13601
Section	EN 13605
Tube	EN 13600

Wieland-Werke AG | Graf-Arco-Straße 36 | 89079 Ulm | Germany
info@wieland.com | wieland.com

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