Can Man AG
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Copper Wire Specification

1. Raw material properties (semi-finished copper)
High purity copper (high conductivity copper as used in the electrical industry).
Electrolytic copper or oxygen-free copper having an electrical conductivity of at least 58.0 Ms/m in the annealed state.

Electrolytic copper E-Cu	99.90 %	Oxygen concentration O2	max. 0.40 %
Oxygen-free copper OF-Cu	99.95 %	Oxygen concentration O2	max. 0.0015 %

2. Material features as delivered
2.1. Dimensional tolerances

Nominal Ø of wire rods	1.0	1.24	1.38	1.50	1.80	mm
Cross sections	0.79	1.21	1.49	1.75	2.55	mm2
Acceptable diameter variation	0/-0.04	0/-0.04	0/-0.04	0/-0.04	0/-0.04	mm
Length-related weight	7.0	10.7	13.3	15.7	22.5	kg/1000 m
Specific weight	8.9	8.9	8.9	8.9	8.9	kg/dm3

2.2. Electrical features (at 20°C)

Resistivity, max.	0.01739 Ω x mm2/m
Conductivity, min.	57.5 m/ Ω x mm2

2.3. Mechanical properties

Yield strength, Rp 0.2	min. 180 N/mm2
Tensile strength, Rm	245 – 285 N/mm2
Elongation fracture	22 – 28 %

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2.4. Surface finish

The wire used for the welding of WIMA seams must be drawn with a smooth surface finish and may not show any surface defects which could influence its further processing on the welding machine. The copper wire must have a blank and oxide-free surface. The additives used during the drawing process which partially adhere to the blank wire should not impair its contact properties.

3. Packing and storage

Bright copper wire not being particularly corrosion-resistant, must be protected accordingly, especially during storage. Add a desiccant to the wire containers to ensure maximum storage time. Moreover the wire containers must be stored in a dry place in order to avoid formation of moisture caused by condensed humidity. This water condensation can result either from difference in temperature between day and night or from a too early unpacking of the wire after its delivery.