

Data Sheet

Copper OFHC (Mac-CopperOFHC-WM)

Description

Oxygen free high conductivity (OFHC) copper brazing filler.

Composition by weight is between **99.990%** and **99.999% Cu**, which represents the purest commercially available form of the metal.

Prime Features:

- Suitable for brazing under vacuum
- Suitable for brazing in an inert atmosphere
- Suitable for brazing in air with flux

Typical Applications:

High-integrity brazed joint duties in:

- Tooling for mining
- Heavy industrial equipment

Specifications

- Quality Assurance to ISO 9002
- CDA 101

Supplied As:

- Foil
- Wire
- Powder
- Extrudable paste

Impurity Limits

ZN	less than 0.001%
CD	less than 0.001%
PB	less than 0.002%
P	less than 0.002%
C	less than 0.01%

All other metallic impurities having a vapor pressure **higher** than 10⁻⁷mm Hg at 500C are limited to 0.002% each. Impurities having a vapor pressure **lower** than 10⁻⁷mm Hg at 500C are limited to a total of 0.075%.

(This applies to all forms except powder and extrudable paste.)

Physical Properties

Thermal Conductivity (Calculated)	398 W/m.K 230 BTU/ft.h.°F
Liquidus Temperature	1085 °C 1983 °F
Solidus Temperature	1983 °C 1670 °F
Thermal Expansion Coefficient	19.4 10 ⁻⁶ /C 10.8 10 ⁻⁶ /°F
Density	8.93 Mg/m ³ 0.323 lb/in ³
Electrical resistivity	1.67 10 ⁹ ohm.m:
Electrical conductivity	60 10 ⁶ /ohm.m
Yield Strength	69 MPa 10.0x10 ³ lb/in ²
Tensile Strength	221 MPa 32.0x10 ³ lb/in ²
Elongation	55%
Poisson's ratio	0.34
Young Modulus	125 GPa 18.1x10 ⁶

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We design and manufacture products for demanding applications in a variety of markets using a comprehensive range of advanced ceramic, glass, precious metal, piezoelectric and dielectric materials. We utilise core competences of applications engineering and superior materials technology, together with state of the art fully integrated manufacturing processes to offer precision ceramic components, ceramic-to-metal assemblies and special coatings for use in a variety of applications.