Data Sheet

Copper OFHC

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, Hydrogen, inert atmosphere and in air with flux
- Ductile with good strength

Typical Applications:

- Tooling for mining
- Heavy industrial equipment
- Automotive components

Suggested base materials:

- Iron, Tool/high speed & carbon/low alloy el, Stainless steel, Nickel, Kovar, Monel, metallized ceramic.

Physical Properties*

Liquidus Temperature	1083 °C
	1981 °F
Solidus Temperature	1083 °C
	1981 °F
Coefficient of Thermal Expansion (CTE)	19.4 x 10^{-6}/C, for 20 – 500 °C
	10.8 x 10^{-6}/°F, for 68 – 932 °F
Thermal Conductivity (Calculated)	398 W/m·K
	230 BTU/ft·h· °F
Density	8.93 Mg/m^3
	0.323 lb/in^3
Yield Strength (0.2% offset)	69 MPa
	10.0 x 10^3 lb/in^2
Tensile Strength	221 MPa
	32.0 x 10^3 lb/in^2
Elongation (2in/50mm gage section)	55%
Electrical Resistivity	16.7 x 10^{-9} ohm·m
Electrical Conductivity	60 x 10^6/ohm·m
Vapor Pressure (Calculated)	XXX
	XXXX
Recommended Brazing Temperatures	1100 °C
Recommended Brazing Atmospheres	10^{-5} mm Hg, H_2, or inert gas

* Please note that all values quoted are based on test pieces and may vary according to component design. These values are not guaranteed in any way and should only be treated as indicative values. They should be used for guidance only and for no other purpose whatsoever.

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^{-7} mm Hg at 500 °C are limited to 0.002% each. Impurities having a vapor pressure lower than 10^{-7} mm Hg at 500 °C are limited to a total of 0.075%. (This applies to all forms except powder and extrudable paste.)

Supplied As:

- Foil
- Wire
- Powder
- Extrudable Paste
- Preforms