

Data Sheet

Cusil™ (Mac-Cusil™-WMM)

Description

High-purity silver/copper alloy for vacuum brazing.
Nominal composition by weight: **72% Ag** and **28% Cu** (both within $\pm 1\%$).

Prime Features:

- Eutectic alloy
- Widely used across industry

Specifications

- Quality Assurance to ISO 9002
- BAu-8

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.)

Typical Applications:

High-integrity brazed joint duties in:

- Aero-engines (OEM and repair)
- Aerospace fuel-line assemblies
- Vacuum tubes
- Wave guide and Klystron assemblies
- Power supply surge arrestors
- Automotive components

Supplied As:

- Foil
- Flexibraz
- Wire
- Powder
- Extrudable paste
- Preforms

Physical Properties

Thermal Conductivity (Calculated)	371 W/m.K 214 BTU/ft.h.°F
Liquidus Temperature	780 °C 1436 °F
Solidus Temperature	780 °C 1436 °F
Thermal Expansion Coefficient	19.6 @RT-500C, 10 ⁻⁶ /C 10.9 @RT-932°F, 10 ⁻⁶ /F
Density	10.0 Mg/m ³ 0.361 lb/in ³
Electrical resistivity	20.4 10 ⁻⁹ ohm.m:
Electrical conductivity	49 10 ⁶ /ohm.m
Yield Strength (0.2% offset)	272 MPa 39x10 ³ lb/in ²
Tensile Strength	372 MPa 54x10 ³ lb/in ²
Elongation (2in/50mm gage section)	19%
Young's modulus	83 GPa 12x10 ⁶ lb/in ²
Poisson's ratio (calculated)	0.36
Knoop Hardness	1010 KHN expressed as MPa