

Data Sheet

Palcusil™ (Mac-Palcusil™ 10-WM)

Description

High-purity silver/copper/palladium alloy for vacuum brazing. Nominal composition by weight: **58% Ag, 32% Cu and 10% Pd.**

Prime Features:

- Excellent for vacuum-tight joints
- Recommended for brazing Cu, Ni, and Kovar
- (Ni-Co-Fe alloy) to Mo-Mn alloys

Specifications

- Quality Assurance to ISO 9002
- Bag-10

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%.
(Not applicable to powder and extrudable paste)

Typical Applications:

- 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
- Flexibraze
- Powder
- Wire
- Extrudable Paste
- Preforms

Physical Properties

Thermal Conductivity (Calculated)	145 W/m.K 84 BTU/ft.h.°F
Liquidus Temperature	852 °C 1566 °F
Solidus Temperature	824 °C 1515 °F
Density	10 mg/m ³ 0.361 lb/in ³
Thermal Expansion Coefficient	18.5 RT-500C, 10 ⁻⁶ /C 10.3 RT-932°F, 10 ⁻⁶ /°F
Electrical Resistivity	53 10 ⁻⁹ ohm.m
Electrical Conductivity	18.9 10 ⁶ /ohm.m
Yield Strength	327 MPa 47.5x10 ³ lb/in ²
Tensile Strength	374 MPa 54.3x10 ³ lb/in ²
Elongation (2in/50mm gage section)	18%

Please note that all values quoted are based on test pieces and may vary according to component design. These values are not guaranteed in anyway whatsoever and should only be treated as indicative and for guidance only.

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From an extensive range of advanced materials we produce components, assemblies and systems that deliver significantly enhanced performance for our customers' products and processes. Our engineered solutions are produced to high tolerances and many are designed for use in extreme environments.

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.