SilverAlloy A-69Ti-Active

Introduction
Aufhauser SilverAlloy A-69Ti-Active is an active, brazing alloy that promotes wetting and good capillary action on several surfaces that would otherwise be difficult to join by brazing. The active components of this alloy promote wetting on, for example, ceramics and aluminum oxides (sapphire).

Applications
Brazing with Aufhauser SilverAlloy A-69Ti-Active provides a reliable method of bonding ceramic to metals (including stainless steels) as well as bonding metal oxides (like sapphire)

Nominal Composition

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<th>Ag %</th>
<th>Cu %</th>
<th>Ti %</th>
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<td>68.8 (± 1)</td>
<td>26.7 (± 1)</td>
<td>4.5 (±0.5)</td>
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Physical Properties *
Solidus Temperature    1435°F  780°C
Liquidus Temperature   1650°F  900°C
Density                5.0 TOz/in³  9.4 g/cm³
Thermal Conductivity   127 BTU h⁻¹ ft⁻¹ °F⁻¹  219 W m⁻¹ °K⁻¹
Thermal Expansion Coefficient (R.T. - 500°C)  10.3 x 10⁻⁶ °F⁻¹  18.5 x 10⁻⁶ °C⁻¹
Recommended Brazing Temperature  1725 – 1775°F  940 – 968°C

Electrical Properties
Electrical Resistivity   20 Ω CM ft  34x10⁻⁹Ω m
Electrical Conductivity  0.049 Ω⁻¹ CM⁻¹ ft  29 x 10⁶ Ω⁻¹m⁻¹

Mechanical Properties
Young’s Modulus         12 x 10⁶ psi  85 GPa
Poisson’s Ratio         0.36
Yield Strength          42,400 psi  292 MPa
Ultimate Tensile Strength  49,200 psi  339 MPa
Elongation (2-inch gage section)  28%

* Aufhauser 69Ti-Active is a composite material. The above properties apply to the alloy before it is used in the brazing process.

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202002