

Meta-Braze™ 503

Gold Copper Brazing Alloy

Meta-braze™503 is a high purity gold copper braze alloy used for brazing ceramics post Molybdenum Manganese metallisation. It is suitable for copper, nickel and Kovar based assemblies in application including aerospace – engines and fuel lines, vacuum tubes, Klystron assemblies, wave guides, automotive components. It has high strength and excellent corrosion resistance.

Standard	ISO 17672:2016 Au 503	Reference Standards AWS A5.8 BVAu-10																
Melting Range	955°C - 970°C	Brazing Temperature: 970°C – 1020°C																
Chemical Composition	<table border="0"> <tr> <td>Gold</td> <td>50%</td> <td>Lead</td> <td>0.002% max</td> </tr> <tr> <td>Copper</td> <td>50%</td> <td>Zinc</td> <td>0.001% max</td> </tr> <tr> <td>Carbon</td> <td>0.005% max</td> <td>Manganese</td> <td>0.001% max</td> </tr> <tr> <td>Cadmium</td> <td>0.001% max</td> <td>Indium</td> <td>0.002% max</td> </tr> </table> <p>All other elements where vapour pressure at 500 °C is $> 1,3 \times 10^{-5}$ Pa. Examples of such elements are Ca, Cs, K, Li, Mg, Na, Rb, S, Sb, Se, Sr, Te and Tl. For such elements (including Cd, Pb and Zn), the total is limited to 0,010 %.</p>	Gold	50%	Lead	0.002% max	Copper	50%	Zinc	0.001% max	Carbon	0.005% max	Manganese	0.001% max	Cadmium	0.001% max	Indium	0.002% max	
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Conditions for Use	Recommended Processes: Vacuum, inert atmosphere, reducing atmosphere Recommended Gap Size: - 0.00 – 0.05mm (0.00 – 0.002")																	
Physical Properties	Density – 12g/cm ³ Tensile Strength – 390 MPa Yield Strength – 128 MPa Elongation – 37.5% (50mm section) Thermal Conductivity – 33 W/mK Thermal Expansion Coefficient – $19.2 \times 10^{-6}/^{\circ}\text{C}$																	
Forms of Supply	Foil – Wire – Powder – Paste – Preforms																	

