

## Prince & Izant Company

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## SILVERBRAZE 50Cu (BVAg-6b)

### TECHNICAL DATA

<b>NOMINAL COMPOSITION</b>	<b>Silver</b>	50.0% ± 1.0	
	<b>Copper</b>	Balance	
	<b>Zinc</b>	0.001 Max	
	<b>Cadmium</b>	0.001 Max	
	<b>Lead</b>	0.002 Max	
	<b>Phosphorus</b>	0.002 Max	
	<b>Carbon</b>	0.005 Max	
	<b>Other</b>	0.15% Max	
	<b>PHYSICAL PROPERTIES</b>	<b>Color</b>	Yellow White
		<b>Solidus</b>	1435°F (779°C)
<b>Liquidus</b>		1602°F (872°C)	
<b>Recommended Brazing Temp.</b>		1650 - 1800°F (899-982°C)	
<b>Density (Troy oz/in<sup>3</sup>)</b>		5.09	
<b>Specific Gravity</b>		9.64	
<b>Electrical Conductivity (%IACS)</b>		78.0	
<b>Electrical Resistivity (Microhm-cm)</b>		2.20	
<b>USES</b>	Often used for electronic applications where Zn & Cd cannot be used. Most common based metals joined are silver, copper and nickel. These materials are joined in reducing or inert atmospheres, or vacuum. Also commonly used to join metalized ceramics.		
	SB50Cu is a binary system like BAg-8, but with a wider melt range. The wide melt range makes it suitable to fill wider gaps. However, it's sluggish behavior can lead to liquation & excessive diffusion if left at the brazing temperature for an extended period of time. It wets best to silver & copper, with limited wetting on iron and nickel base metals due to their limited solubility in silver. Wetting capabilities can be increased however under vacuum and dry hydrogen conditions. SB50Cu may also exhibit an increased re-melt temperature and a decrease in fluidity due to solution of either copper or silver into the eutectic phase.		
<b>BRAZING CHARACTERISTICS</b>			
<b>PROPERTIES OF BRAZED JOINTS</b>	The properties of a brazed joint are dependent upon numerous factors including base metal properties, joint design, metallurgical interaction between the base metal and the filler metal.		
<b>SPECIFICATIONS</b>	Silver Braze 50Cu alloy conforms to: American Welding Society (AWS) A5.8/A5.8M BVAg-6b		
<b>AVAILABLE FORMS</b>	Wire, strip, engineered preforms, specialty preforms per customer specification, powder and paste.		

Individuals requiring further information and Engineering Specification Documents may wish to contact the Engineering Society for Advanced Mobility, Land Sea Air and Space, The Society of Automotive Engineers <http://www.sae.org/> (SAE AMS) or The American Welding Society (AWS) <http://aws.org/>

#### **NOTE:**

#### **DISCLAIMER**

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