

Prince & Izant Company

12999 Plaza Drive
Cleveland, Ohio 44130
T: 216-362-7000
F: 216-362-7456
princeizant.com



SILVERBRAZE 54 (BAg-13) TECHNICAL DATA

NOMINAL COMPOSITION	Silver	54.0% ± 1.0											
	Copper	40.0% ± 1.0											
	Zinc	5.0% ± 2.0											
	Nickel	1.0% ± 0.5											
	Other Elements Total	0.15% Max											
PHYSICAL PROPERTIES	Color	White											
	Solidus	1325°F (718°C)											
	Liquidus	1575°F (857°C)											
	Recommended Brazing Temperature	1625-1675°F (885-912°C)											
	Density (Troy oz/in³)	5.07											
	Specific Gravity	9.63											
	Electrical Conductivity (%IACS)	49.8											
Electrical Resistivity (Microhm-cm)	3.46												
USES	Silver Braze 54 is employed in numerous furnace brazing situation because of its low zinc content. The US Air Force specifies it for many jet engineer sub-assemblies. It is used for making joints that are subjected to elevated temperatures, ranging up to 700°F (370°C) particularly on stainless steel.												
	Silver Braze 54 is an intermediate temperature silver brazing alloy with a rather long, 235°F (130°C) melting range. It has a tendency to liquate (Separation into low and high melting constituents) if heated slowly through its melting range. Therefore, it is preferable to use this alloy where the assembly can be heated rapidly to brazing temperature. The long melting range of this alloy is useful when wide gap joints are hand fed since semi-fluid alloys can be working across the gaps. Flux is recommended.												
BRAZING CHARACTERISTICS	Stainless steel butt joints furnace brazed (in atmosphere) with Silver Braze 54 develop room temperature tensile strengths of 50,000 – 60,000 PSI with commercial joint clearances. Optimum joint clearances will produce higher tensile values. The results listed below were generated from brazed butt joints which were tested under standard room temperature conditions.												
		<table><thead><tr><th></th><th><u>Tensile Strength (lbs/in²)</u></th><th><u>Elongation (%. 2" gage length)</u></th></tr></thead><tbody><tr><td>Copper</td><td>30,000-35,000</td><td>10-19</td></tr><tr><td>Brass</td><td>35,000-50,000</td><td>13-25</td></tr><tr><td>Nickel-Silver</td><td>35,000-40,000</td><td>2-3</td></tr></tbody></table>		<u>Tensile Strength (lbs/in²)</u>	<u>Elongation (%. 2" gage length)</u>	Copper	30,000-35,000	10-19	Brass	35,000-50,000	13-25	Nickel-Silver	35,000-40,000
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PROPERTIES OF BRAZED JOINTS													
SPECIFICATIONS	Silver Braze 54 conforms to: Unified Numbering System (UNS) P07540, American Welding Society (AWS) A5.8/A5.8M BAg-13 and Society of Automotive Engineers (SAE) AMS 4772												
	Wire, strip, engineered preforms, specialty preforms per customer specification, powder and paste.												
AVAILABLE FORMS													

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:

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