

## Prince & Izant Company

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## AL 822

### TECHNICAL DATA

<b>NOMINAL COMPOSITION</b>	<b>Zinc</b>	Balance
	<b>Aluminum</b>	22.0% ± 1.0
	<b>Cadmium</b>	0.01% Max
	<b>Lead</b>	0.1% Max
	<b>Other Elements, Total</b>	0.15% Max
<b>PHYSICAL PROPERTIES</b>	<b>Color</b>	Grayish-White
	<b>Solidus</b>	826°F (441°C)
	<b>Liquidus</b>	905°F (471°C)
	<b>Recommended Brazing Temperature</b>	950-1000°F (510-537°C)
	<b>Density (Lbs/in<sup>3</sup>)</b>	0.19
	<b>Electrical Conductivity (%IACS)</b>	N/A
	<b>Electrical Resistivity (Microhm-cm)</b>	N/A
<b>USES</b>	AL 822 is a stable mixture of aluminum-zinc filler metal and a non-corrosive cesium-based flux for joining all brazeable grades of aluminum. This alloy can be used in torch, induction, and controlled atmosphere brazing processes. AL 822 is available in the form of either flux-containing wire or flux-loaded paste.	
	<b>BRAZING CHARACTERISTICS</b> AL 822 has a low melting point and narrow melt range which makes it suitable for brazing aluminum alloys. In addition, the high zinc content relative to other aluminum filler metals provides increased wettability. Solution temperature during heat treating must be below the solidus of the braze alloy in order to ensure integrity of the joint is maintained.	
<b>POST-BRAZE CLEANING</b>	The cesium-based flux and its residues are non-hygroscopic and non-corrosive, therefore post-braze cleaning operations are typically not required. If cleaning is desired, a 50/50 mixture of nitric acid and distilled water can be used to remove residue. The part can be agitated while submerged in the solution if need be.	
	<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. Joint clearances of 0.003-0.006" (0.076-0.152 mm) per side ideal for achieving the highest joint strength in aluminum brazed assemblies. The increased zinc-content of AL 822 relative to other low temperature brazing/soldering alloys typically provides higher strength characteristics under proper joint design conditions.	
<b>SPECIFICATIONS</b>	AL 822 conforms to: N/A	
<b>AVAILABLE FORMS</b>	AL 822 is available in paste, wire and engineered preforms	

**WARRANTY &  
STORAGE**

Prince & Izant warrants AL 822 paste for a period of 90 days from the date of shipment if stored in the original unopened container. Ideal storage conditions include a temperature range of 65-75°F (18-24°C) and a clean, dry environment. Reconstitution of the paste may be required for homogeneity if separation has occurred. It should be noted that typically the product can be used well beyond the 90-day period mentioned above, provided the customer is not experiencing any issues.

Flux-containing wire, when stored under the proper conditions, will remain fully functional for a period of no more than 2 years.

**SAFETY  
INFORMATION**

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The operation and maintenance of brazing equipment or facility should conform to the provisions of American National Standard (ANSI) Z49.1, "Safety in Welding and Cutting."

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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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