

## Prince & Izant Company

12999 Plaza Drive  
Cleveland, Ohio 44130  
T: 216-362-7000  
F: 216-362-7456  
[princeizant.com](http://princeizant.com)



## CDA 680 (RBCuZn-B) TECHNICAL DATA

<b>NOMINAL COMPOSITION</b>	<b>Copper</b>	58.0% ± 2.0
	<b>Zinc</b>	Remaining
	<b>Iron</b>	0.75% ± 0.45
	<b>Tin</b>	0.95% ± 0.15
	<b>Manganese</b>	0.255% ± 0.245
	<b>Nickel</b>	0.5% ± 0.3
	<b>Lead</b>	0.05% Max
	<b>Aluminum</b>	0.01% Max
	<b>Silicon</b>	0.12% ± 0.08
	<b>Other Elements, Total</b>	0.50% Max
<b>PHYSICAL PROPERTIES</b>	<b>Color</b>	Brass Yellow
	<b>Solidus</b>	1590°F (866°C)
	<b>Liquidus</b>	1620°F (882°C)
	<b>Recommended Brazing Temperature</b>	1670-1720°F (910-938°C)
	<b>Density (lbs./in<sup>3</sup>)</b>	0.296
	<b>Specific Gravity</b>	8.19
	<b>Tensile Strength (ksi)</b>	65
	<b>Elongation, 2" gage length (%)</b>	25
<b>Brinell Hardness</b>	92	
<b>USES</b>	<p>CDA 680 is a low fuming bronze filler metal used for brazing of ferrous and non-ferrous alloys such as steel and copper. This alloy is typically used where close fit up cannot be maintained and high brazing temperatures are permissible. The addition of iron and manganese increases both the hardness and strength of the braze joint while the addition of nickel ensures uniform distribution of iron in the deposit.</p>	
<b>BRAZING CHARACTERISTICS</b>	<p>CDA 680 has good wetting characteristics on ferrous and non-ferrous materials particularly steels and coppers. Maximum strength and joint integrity are obtained where joint clearance falls within the range of 0.003in – 0.005in per side. Heating methods include torch, induction and furnace. A slightly oxidizing flame should be used when torch brazing.</p>	
<b>PROPERTIES OF BRAZED JOINTS</b>	<p>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.</p>	
<b>SPECIFICATIONS</b>	<p>CDA 680 alloy conforms to: Unified Numbering System (UNS) C68000 and American Welding Society (AWS) A5.8/A5.8M RBCuZn-B</p>	
<b>AVAILABLE FORMS</b>	<p>Wire, strip, engineered preforms, specialty preforms per customer specification, powder and paste.</p>	

**SAFETY  
INFORMATION**

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."

---

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**

The information and recommendations contained in this publication have been provided without charge & compiled from sources believed to be reliable and to represent the best information available on the subject at the time of issue. No warranty, guarantee, or representation is made by the Prince and Izant Company, Inc. as to the absolute correctness or sufficiency of any representation contained in this and other publications; Prince and Izant Company, Inc. assumes no responsibility in connection therewith; nor can it be assumed that all acceptable safety measures are contained in this (and other publications, or that other or additional measures may not be required under particular or exceptional conditions or circumstances.