

## Bellman-Melcor

7575 W. 183<sup>rd</sup> Street

Tinley Park, IL 60477

LOCAL: 708-532-5000

TOLL FREE: 800-367-6024

[bellmanmelcor.com](http://bellmanmelcor.com)



## #A-45T (BAg-36)

### TECHNICAL DATA

<b>NOMINAL COMPOSITION</b>	<b>Silver</b>	45.0% ± 1.0	
	<b>Copper</b>	27.0% ± 1.0	
	<b>Zinc</b>	25.0% ± 2.0	
	<b>Tin</b>	3.0% ± 0.5	
	<b>Other Elements Total</b>	0.15% Max	
<b>PHYSICAL PROPERTIES</b>	<b>Color</b>	Pale Yellow	
	<b>Solidus</b>	1195°F (646°C)	
	<b>Liquidus</b>	1251°F (677°C)	
	<b>Recommended Brazing Temperature</b>	1301-1351°F (705-732°C)	
	<b>Density (Troy oz/in<sup>3</sup>)</b>	4.85	
	<b>Specific Gravity</b>	9.20	
	<b>Electrical Conductivity (%IACS)</b>	18.0	
<b>Electrical Resistivity (Microhm-cm)</b>	9.60		
<b>USES</b>	<p>#A-45T is a general purpose, low temperature filler metal used in cadmium-free brazing applications. It offers an excellent compromise between low melting point and moderate silver content. For improved corrosion resistance in stainless steel joints, use an alloy that contains a small amount of nickel.</p>		
<b>BRAZING CHARACTERISTICS</b>	<p>#A-45T is a free-flowing, low temperature filler metal commonly used as a replacement of cadmium-bearing filler metals of similar silver content. This alloy is best suited for narrow gap applications (0.001in. – 0.005in radial joint clearance). Flux should be used with this alloy.</p>		
<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. The results listed below were generated from brazed butt joints which were tested under standard room temperature conditions.		
		<b><u>Tensile Strength (lbs/in<sup>2</sup>)</u></b>	<b><u>Elongation (% , 2" gage length)</u></b>
	Copper	28,000-33,000	25-35
	Brass	35,000-45,000	15-30
	Low Carbon Steel	55,000-65,000	8-13
304 Stainless Steel	80,000-85,000	2-5	
<b>SPECIFICATIONS</b>	#A-45T alloy conforms to: Unified Numbering System (UNS) P07454 and American Welding Society (AWS) A5.8/A5.8M BAg-36		
<b>AVAILABLE FORMS</b>	Wire, strip, engineered preforms, specialty preforms per customer specification, powder and paste.		
<b>SAFETY INFORMATION</b>	The operation and maintenance of brazing equipment or facility should conform to the provisions of 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 Bellman-Melcor (A Prince and Izant Company, Inc.) as to the absolute correctness or sufficiency of any representation contained in this and other publications; Bellman-Melcor (A Prince and Izant Company, Inc., 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. The company and product names referenced herein are for identification purposes only. All trademarks and registered trademarks are the property of their respective owners.