

**Bellman-Melcor LLC**  
 7575 West 183rd Street  
 Tinley Park, Illinois 60477  
**Phone:** 1-800-367-6024 • **Fax:** 1.888.BRAZE-IT-272.9348  
**Email:** [sales@bellmanmelcor.com](mailto:sales@bellmanmelcor.com) • **Website:** [www.bellmanmelcor.com](http://www.bellmanmelcor.com)



### Item # Brazelt A-45, Cadmium Free Brazing Alloys

Brazelt A-45 is a good general purpose brazing alloy often used when cadmium must be avoided such as in the dairy and food industries. It is also used for brazing in the electrical industry and for brazing brass parts such as ships' piping, band instruments, lamps, etc.

[Nominal Composition](#) · [Specifications](#) · [Physical Constants](#) · [Properties of Brazed Joints](#) · [Applications](#) · [Safety Information](#) · [Available Forms](#)

#### Nominal Composition

<b>Silver (Ag)</b>	45.0 ± 1.0%
<b>Copper (Cu)</b>	30.0 ± 1.0%
<b>Zinc (Zn)</b>	25.0 ± 2.0 %
<b>Nickel (Ni)</b>	0
<b>Total Other Elements</b>	0.15% Max.

#### Specifications

<b>Melting Pt.</b>	1225 °F 660 °C
<b>Flow Pt.</b>	1370 °F 740 °C
<b>MBT<sup>1</sup></b>	1500
<b>AWS A5.8</b>	BAG-5
<b>ASME</b>	BAG-5
<b>AMS</b>	4772
<b>QQ-B-654</b>	BAG-5
<b>MIL-B-15395</b>	Grade 1
<b>Resale Options<sup>2</sup></b>	Brazing Paste Brazing Rod Brazing Strip Brazing wire
<b>Preform Options</b>	Brazing Discs Brazing Rings Brazing Washers Custom Designs Cut-Offs Edgewounds
<b>Approx. Wire Length (BCuP/lb.) (BAG/Tr.oz)</b>	270 in @ 0.031 diameter 30 in @ 0.093 diameter 65 in @ 0.062 diameter

<sup>1</sup> Recommended Brazing Temperature

<sup>2</sup> Brazing Wire & Brazing Strip - Spooling Available  
 Brazing Rod - Flux Coating Available

## Physical Constants

<b>Solidus</b>	1225 °F 663 °C
<b>Liquidus</b>	1370 °F 743 °C
<b>Brazing Range</b>	1370 to 1550 °F 743 to 843 °C
<b>Specific Gravity</b>	9.11
<b>Density</b>	4.80 T.oz./cu.in.
<b>Electrical Conductivity</b>	19.0 % IACS
<b>Electrical Resistivity</b>	9.08 Micro ohm-cm
<b>Color</b>	Yellow White

## Properties of Brazed Joints

Generally, the joint strength using Brazeit A-45 will surpass the strengths of the base metals. Strength is a function of the base metals being joined, type of joint, design of joint, joint clearances and brazing procedures. The recommended maximum operating temperature for Brazeit A-45 is up to 400 °F in continuous service and up to 600 °F in intermittent services. Where improved corrosion resistance is needed, Brazeit A-50N and Brazeit A-40N2 are recommended over silver base filler metals not containing nickel.

## Applications

Typical applications are the joining of ferrous, nonferrous and dissimilar metals and alloys with close joint clearances.

Excellent replacement to cadmium containing alloys. Broad application in furnace brazing.

## Safety Information

It is essential that adequate ventilation be provided so that personnel will not inhale gases and fumes while brazing. 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". For more complete information, refer to the Material Safety Data Sheet for Brazeit A-45.

## Available Forms

Standard forms of Brazeit A-45 are brazing wire, brazing strip, and brazing preforms.