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### Item # Brazeit 25, Cadmium Bearing Brazing Alloys

Brazeit 25 is historically a modification of Brazeit 30 with a further reduction in silver content resulting in a higher melting point and a longer melting range (250 °F). Brazeit 25 is used for brazing steel, stainless steel, copper, copper alloys, nickel, nickel alloys or combinations of these metals. It is similar to Brazeit 30 in performance although it contains less silver. Its broader melting range is helpful where clearances are not uniform. During melting, Brazeit 25 passes from the solid state to a mushy or plastic state and progressively to a liquid. If heated slowly through this plastic state (1125-1375 °F) the liquid portion may flow from the solid portion. This causes a separation of the alloy into a low temperature melting (fluid) portion and a high temperature melting (solid) portion. This phenomenon is called liquation. The high temperature melting portion will melt only above the liquidus temperature of Brazeit 25. For this reason, Brazeit 25 should be heated rapidly through the melting range.

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#### Nominal Composition

Silver (Ag)	25.0 ± 1.0%
Copper (Cu)	35.0 ± 1.0%
Zinc (Zn)	26.0 ± 2.0%
Cadmium (Cd)	13.5 ± 1.0%
Total Other Elements	0.15% Max.

#### Specifications

Melting Pt.	1125 °F 605 °C
Flow Pt.	1375 °F 745 °C
MBT <sup>1</sup>	1425
AWS A5.8	BAG-27
ASME	BAG-27
Preform Options	Brazing Discs Brazing Rings Brazing Washers Cut-Offs
Resale Options <sup>2</sup>	Brazing Rod Brazing Strip Brazing wire
Pricing & availability	We offer competitive pricing backed up by an extensive in-house inventory. For custom formulations, consult our technical support team for assistance.

<sup>1</sup> Recommended Brazing Temperature

<sup>2</sup> Rod - Flux Coating Available

#### Physical Constants

Solidus	1125 °F 607 °C
Liquidus	1375 °F 745 °C

<b>Brazing Range</b>	1310 to 1550 °F 710 to 843 °C
<b>Specific Gravity</b>	8.95
<b>Density</b>	4.71 T.oz./cu.in.
<b>Electrical Conductivity</b>	29.7 % IACS
<b>Electrical Resistivity</b>	5.7 Micro ohm-cm
<b>Color</b>	Light Yellow

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### Properties of Brazed Joints

Generally, the joint strength using Brazeit 25 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 temperatures for Brazeit 25 is up to 400 °F in continuous service and up to 600 °F in intermittent service. Where improved corrosion resistance is needed, Brazeit A-50N and Brazeit A-40N2 are recommended over silver base filler metals not containing nickel.

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### Applications

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

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### Safety Information

Brazeit 25 contains cadmium and therefore upon heating may produce toxic fumes. 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 25.

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### Available Forms

Standard forms of Brazeit 25 are brazing wire, brazing strip and brazing preforms.