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Item # Brazelt 35, Cadmium Bearing Brazing Alloys

An economical alternative to Brazeit 45, this alloy offers good flow and is well suited for application where fit-up is less than ideal.

Brazeit 35 is an alloy with a melting range suitable for brazing steel, stainless steel, copper, copper alloys, nickel, nickel alloys or combinations of these metals. Brazeit 35 is free-flowing and suited for general purpose work. Its broader melting range is helpful where clearances are not uniform. During melting, Brazeit 35 passes from the solid state to a mushy or plastic state and progressively to a liquid. If heated slowly through this plastic state (1125-1295 °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 normal brazing temperature of Brazeit 35. For this reason, Brazeit 35 should be heated rapidly through the melting range.

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Nominal Composition

Silver (Ag)	35.0 ± 1.0%
Copper (Cu)	26.0 ± 1.0%
Zinc (Zn)	21.0 ± 2.0%
Cadmium (Cd)	18.0 ± 1.0%
Total Other Elements	0.15% Max.

Specifications

Melting Pt.	1125 °F 607 °C
Flow Pt.	1295 °F 702 °C
MBT¹	1550
AWS A5.8	BAG-2
ASME	BAG-2
AMS	4768
QQ-B-654	Grade VIII
MIL-B-15395	Grade VIII
Preform Options	Brazing Discs Brazing Rings Brazing Washers Cut-Offs
Resale Options²	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.
Approx. Wire Length (BCuP/lb.) (BAG/Tr.oz)	270 in @ 0.031 diameter 30 in @ 0.093 diameter 65 in @ 0.062 diameter

¹ Recommended Brazing Temperature

² Rod - Flux Coating Available

Physical Constants

Solidus	1125 °F 607 °C
Liquidus	1295 °F 702 °C
Brazing Range	1295 to 1550 °F 702 to 843 °C
Specific Gravity	9.29
Density	4.84 T.oz./cu.in.
Electrical Conductivity	27.5 % IACS
Electrical Resistivity	6.26 Micro ohm-cm
Color	Light Yellow

Properties of Brazed Joints

Generally, the joining strength using Brazeit 35 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, joint clearances, and brazing procedures. The recommended maximum operating temperature for Brazeit 35 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.

Applications

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

Broader melt range than Sil. 45. Suitable for larger gap clearance and easier filleting.

Safety Information

Brazeit 35 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 on Brazeit 35.

Available Forms

Standard forms of Brazeit 35 are wire, strip and preforms.