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Item # BrazeIt 45, Cadmium Bearing Brazing Alloys

Good for brazing dissimilar metals.
Brazeit 45 is the lowest melting brazing alloy available composed of silver, copper, zinc and cadmium. It is suitable for brazing most metals except aluminum and magnesium. It is used for brazing steel, stainless steel, copper, copper alloys, nickel, nickel alloys or combinations of these metals. It has wide acceptance by industrial users, as well as being included in Federal and military specifications on brazing filler metals or alloys. It has a narrow melting range which is not apparent in most brazing operations, making it flow freely through a capillary.

Nominal Composition · Specifications · Physical Constants · Properties of Brazed Joints · Applications · Safety Information · Available Forms

Nominal Composition

Silver (Ag)	45.0 ± 1.0%
Copper (Cu)	15.0 ± 1.0%
Zinc (Zn)	16.0 ± 2.0%
Cadmium (Cd)	24.0 ± 1.0%
Total Other Elements	0.15% Max.

Specifications

Melting Pt.	1125 ºF 607 ºC
Flow Pt.	1145 ºF 618 ºC
MBT[1]	1400
AWS A5.8	BAg-1
ASME	BAg-1
AMS	4769
QQ-B-654	Grade VII
MIL-B-15345	Grade VII
Preform Options	Brazing Discs Brazing Rings Brazing Washers Cut-Offs
Resale Options[2]	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)	265 in; 0.031 diameter 28 in; 0.093 diameter 65 in; 0.062 diameter

[1] Recommended Brazing Temperature
[2] Rod - Flux Coating Available

Physical Constants

Solidus	1125 ºF 607 ºC
Liquidus	1145 ºF 618 ºC
Brazing Range	1145 to 1400 ºF 618 to 760 ºC
Specific Gravity	9.34
Density	4.96 T.oz./cu.in.
Electrical Conductivity	27.6 % IACS
Electrical Resistivity	6.06 Micro ohm-cm
Color	Light Yellow

Properties of Brazed Joints

Generally, the joint strength using Brazeit 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 45 is up to 400 ºF in continuous service and up to 600 ºF 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 brazing of ferrous, nonferrous and dissimilar metals and alloys close joint clearances.

Lowest melting range in joining ferrous, non-ferrous and dissimilar metals with close joint clearance requirement.

Safety Information

Brazeit 45 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 45.

Available Forms

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