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Item # Brazelt A-50N, Cadmium Free Brazing Alloys

An excellent substitute for Brazeit #50N. It offers good strength and flow characteristics and works well on stainless steel and carbide. Brazeit A-50N is a silver brazing alloy that has found numerous applications for joining 300 series stainless steels in the food, medical and dental fields. The absence of cadmium in the alloy permits direct contact to food and for various medical or hospital applications. Addition of nickel to the silver-copper zinc alloy imparts corrosion properties which retards joint or interface corrosion of the brazed assembly. The nickel element in Brazeit A-50N also improves the bond strength when joining of tungsten carbide cutting tips. Brazeit A-50N is a suitable replacement to the cadmium containing BAg-3 alloy. Its low liquidus of 1305 °F reduces surface oxidation and sensitization to stainless steels.

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Nominal Composition

Silver (Ag)	50.0 ± 1.0%
Copper (Cu)	20.0 ± 1.0%
Zinc (Zn)	28.0 ± 2.0 %
Nickel (Ni)	2.0 ± 0.5 %
Total Other Elements	0.15% Max.

Specifications

Melting Pt.	1220 °F 660 °C
Flow Pt.	1305 °F 707 °C
MBT ¹	1550
AWS A5.8	BAg-24
ASME	BAg-24
AMS	4788
Resale Options ²	Brazing Paste Brazing Rod Brazing Strip Brazing wire
Preform Options	Brazing Discs Brazing Rings Brazing Washers Custom Designs Cut-Offs Edgewounds
Approx. Wire Length (BCuP/lb.) (BAg/Tr.oz)	275 in @ 0.031 diameter 31 in @ 0.093 diameter 70 in @ 0.062 diameter

¹ Recommended Brazing Temperature

² Brazing Wire & Brazing Strip - Spooling Available
 Brazing Rod - Flux Coating Available

Physical Constants

Solidus	1220 °F 660 °C
Liquidus	1305 °F 707 °C
Brazing Range	1310 to 1550 °F 710 to 843 °C
Specific Gravity	8.98
Density	4.73 T.oz./cu.in.
Electrical Conductivity	15.0 % IACS
Electrical Resistivity	11.75 Micro ohm-cm
Color	Light Yellow

Properties of Brazed Joints

Generally, the joint strength using Brazeit A-50N 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-50N is up to 700 °F (370 °C).

Applications

Typical applications are the joining of 300 series stainless steels in the food, medical, and dental fields. A good replacement to Brazeit 50N in attaching carbides.

Used with 300 series stainless in Food, Medical, and Dental fields. Good replacement of Sil. 50N in carbide brazing.

Safety Information

It is essential that adequate ventilation be provided so that personnel will not inhale gases and fumes while 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-50N.

Available Forms

Standard forms of Brazeit A-50N are brazing wire, brazing strip, and brazing preforms.