

Brazelt 50N (BAg-3)

Nominal Composition:	
Silver	50.00 ± 1.0%
Copper	15.5 ± 1.0%
Zinc	15.5 ± 2.0%
Cadmium	16.0 ± 1.0%
Nickel	3.0 ± 0.5%
Total other Elements	0.15 % Max
Physical Constants:	
Solidus	1170°F (632°C)
Liquidus	1270°F (688°C)
Brazing Range	1200-1500°F (688-816°C)
Specific Gravity	9.49
Density (lb/cu in)	5.00
Electrical Conductivity (% IACS)	18
Electrical Resistivity (Michroh-m-cm)	9.58
Color	Light Yellow

DESCRIPTION:

Brazelt 50N is a modification of Brazelt 50. It was originally introduced because of somewhat better corrosion resistance than Brazelt 50 for certain conditions, and is still used for such purposes. It has proved successful on many marine applications and for dairy equipment which must withstand strong cleaning solutions. The 3% nickel content of this alloy also improves its wetting of stainless steel and tungsten carbide tool tips. At the present time, the largest use of this solder is for attaching carbide cutting tips to tool shanks.

PROPERTIES OF BRAZED JOINTS:

Generally, the joint strength using Brazelt 50N surpasses 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 Brazelt 50N is up to 400°F (continuous service) and 600°F (intermittent service).

APPLICATIONS:

When melting, Brazelt 50N passes from the solid state to a mushy or plastic range and progressively to a liquid. The largest portion of Brazelt 50N melts in the upper section of its temperature range. Therefore, the alloy has a good body while in the plastic range and is suitable for building fillets or bridging large gaps. Late melting of the major portion of the alloy also helps minimize any separation of the solid and liquid portions by liquation during melting.

SPECIFICATIONS:

AWS A5-8	BAg-3
ASME	BAg-3
QQ-B-654	Grade V
AMS	4771
MIL-B-15345	Grade V

SAFETY INFORMATION:

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 Brazelt 50N.

AVAILABLE FORMS:

Standard forms of Brazelt 50N are wire, strip and preforms.