Prince & Izant Company
12999 Plaza Drive
Cleveland, Ohio 44130
T: 216-362-7000
F: 216-362-7456
princeizant.com

SILVERBRAZE 72Ni (BVAg-8b)

TECHNICAL DATA

NOMINAL COMPOSITION

Silver	71.5% ± 1.0
Copper	Remaining
Nickel	0.5% ± 0.2
Cadmium	0.001% max.
Zinc	0.001% max.
Phosphorus	0.002% max.
Lead	0.002% max.
Carbon	0.005% max.
Other volatile elements each*	0.002% max.
Volatile elements total	0.010% max.
Total non-volatile elements (Grade 1)	0.01% max.
Total non-volatile elements (Grade 2)	0.05% max.

*Elements with a vapor pressure higher than 10^{-7} torr at 932ºF (such as Mg, Sb, K, Li,TI,S,Cs,Rb,Se,Te,Sr, and Ca) are limited to 0.001% each for Grade 1 and 0.002% for Grade 2.

PHYSICAL PROPERTIES

Color	Silver White
Solidus	1435°F (779°C)
Liquidus	1465°F (795°C)
Recommended Brazing Temperature	1515-1565°F (824-852°C)
Density (Troy oz/in^3)	5.27
Specific Gravity	10.0
Electrical Conductivity (%IACS)	78.8
Electrical Resistivity (Microhm-cm)	2.19

USES

Silver Braze 72Ni is generally used to join silver, copper and nickel base alloys in reducing or inert atmospheres or vacuum. It is also widely used to join metallized ceramics to metals in vacuum. In particular it is utilized quite often in the brazing of electronic tube assemblies.

BRAZING CHARACTERISTICS

SB72Ni is a silver-copper eutectic composition modified with a small addition of nickel which expands the melt range slightly. The addition of nickel also improves wetting capabilities to both ferrous and non-ferrous alloys. On either silver base of copper base alloys, SB72Ni can exhibit a decreased fluidity and an increased re-melt temperature due to the solution of either silver or copper in the eutectic. Brazing time and temperature should be minimized to prevent excessive diffusion and erosion of the base metal.

PROPERTIES OF BRAZED JOINTS

The properties of a brazed joint are dependent upon numerous factors including base metal properties, joint design, metallurgical interaction between the base metal and the filler metal. The results listed below were generated from brazed butt joints which were tested under standard room temperature conditions:

	Tensile Strength (lbs/in^2)	Elongation, in 2" (%)
Copper	30,000-35,000	10-19
Brass	35,000-50,000	13-25
Nickel-Silver	35,000-40,000	2-3
1020 Steel	45,000-55,000	8-12

SPECIFICATIONS

Silver Braze 72Ni conforms to: Unified Numbering System (UNS) P07728 and American Welding Society (AWS) A5.8/A5.8M BVAg-8b Grades 1 and 2

AVAILABLE FORMS

Wire, strip, engineered preforms, specialty preforms per customer specification, powder and paste.

Individuals requiring further information and Engineering Specification Documents may wish to contact the Engineering Society for Advanced Mobility, Land Sea Air and Space, The Society of Automotive Engineers http://www.sae.org/ (SAE AMS) or The American Welding Society (AWS) http://aws.org/

NOTE:

DISCLAIMER