



235 Kilvert Street  
Warwick, RI 02886

*A World-Class Quality Partner*  
**ISO 9001:2008**  
Registered

**PRODUCT:** **SILVALOY<sup>®</sup> A50N**  
**(AWS BAg-24)**

### **COMPOSITION:**

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Silver	50.0 wt%
Copper	20.0 wt%
Zinc	28.0 wt%
Nickel	2.0 wt%
Total Other Elements	0.15 wt% Max.

### **MATERIAL PROPERTIES:**

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Solidus	1220°F (660°C)
Liquidus	1305°F (707°C)
Brazing Range	1305-1550°F (707-843°C)
Specific Gravity	8.968
Density (t.oz./cu in)	4.726
Electrical Conductivity (% IACS)	15.0
Electrical Resistivity (Microhm-cm)	11.75
Color	Light Yellow

### **DESCRIPTION:**

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**SILVALOY A50N** is a cadmium free silver brazing alloy. Addition of nickel to the silver-copper zinc alloy imparts corrosion properties which retards joint or interface corrosion of the brazed assembly. **SILVALOY A50N** is a suitable replacement to the cadmium containing BAg-3 alloy SILVALOY 50N. Its low liquidus of 1305°F reduces surface oxidation and sensitization to stainless steels.

### **APPLICATIONS:**

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Typical applications are the joining of 300 series stainless steels in the food, medical, and dental fields. The nickel element in **SILVALOY A50N** also improves the bond strength when joining of tungsten carbide cutting tips.



**PRODUCT: SILVALOY® A50N - CONTINUED  
(AWS BAg-24)**

**SPECIFICATIONS:**

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AWS A5.8	BAg-24
ASME	BAg-24
SAE	AMS 4788

**AVAILABLE FORMS:**

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Standard forms of **SILVALOY A50N** are wire, strip, and preforms.

**PROPERTIES OF BRAZED JOINTS:**

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Generally, the joint strength using **SILVALOY A50N** 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 **SILVALOY A50N** is up to 700°F (370°C).

**SAFETY INFORMATION:**

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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 **SILVALOY A50N**.

**LIABILITY-DISCLAIMER:**

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