



235 Kilvert Street
Warwick, RI 02886

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**PRODUCT: SILVALOY[®]A50N FLUX COATED ROD
(AWS BAg-24)**

COMPOSITION:

Silver	42.75 wt%
Copper	17.10 wt%
Zinc	23.94 wt%
Nickel	1.71 wt%
Flux	14.50 wt%
Total Other Elements	0.15 wt% Max.

MATERIAL PROPERTIES:

Solidus	1220°F (660°C)
Liquidus	1305°F (705°C)
Brazing Range	1310-1550°F (710-843°C)
Specific Gravity of braze metal	8.968
Density (toz./cu in) of braze metal	4.726
Electrical Conductivity (% IACS)	15.0
Electrical Resistivity (Michroh-m-cm)	11.75
Color	Light Yellow

DESCRIPTION:

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.

The flux coating is a water base mixture consisting of potassium salts of fluorine and boron. The flux is extruded onto the rod and baked at precise time and temperature to impart sufficient bonding and hardness to the coating. Sufficient ductility remains in the coating to allow for generous bending of the rod to reach areas of difficult access. When the rod is placed into the torch flame, the flux will melt several hundred degrees before the alloy, flowing onto the work surface, and preparing the surface for the subsequent melting of the braze alloy.

APPLICATIONS:

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 FLUX COATED ROD - CONTINUED
(AWS BAg-24)**

SPECIFICATIONS:

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

PROPERTIES OF BRAZED JOINTS:

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

SAFETY INFORMATION:

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 FC**.

LIABILITY-DISCLAIMER:

Wolverine Joining Technologies, LLC, seeks to represent reliable information concerning the composition, properties and use of its products. The technical information provided in this publication is provided at no charge and is without guarantee, warranty or responsibility of any kind, expressed or implied.

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