



235 Kilvert Street
Warwick, RI 02886

A World-Class Quality Partner
ISO 9001:2000
Certified

PRODUCT: **SILVALOY® A54N**
(AWS BAg-13)

COMPOSITION:

Silver	54.0 wt%
Copper	40.0 wt%
Zinc	5.0 wt%
Nickel	1.0 wt%
Total Other Elements	0.15 wt% Max.

MATERIAL PROPERTIES:

Solidus	1325°F (718°C)
Liquidus	1575°F (857°C)
Brazing Range	1575-1775°F (857-968°C)
Specific Gravity	9.590
Density (toz/cu.in.)	5.054
Electrical Conductivity (% IACS)	49.8
Electrical Resistivity (Michroh-m-cm)	3.46
Color	White

DESCRIPTION:

SILVALOY A54N is a silver brazing alloy suitable for furnace brazing due to its low zinc content. Its broader melting range (250°F) is helpful where clearances are not uniform. During melting, **SILVALOY A54N** passes from the solid state to a mushy or plastic state and progressively to a liquid. If heated slowly through this plastic state (1325-1575°) the liquid portion may flow from the solid portion. This causes a separation of the alloy into a low temperature melting (fluid) portion and a high temperature melting (solid) portion. This phenomenon is called liquation. The high temperature melting portion will melt only above the normal brazing temperature of **SILVALOY A54N**. For this reason, **SILVALOY A54N** should be heated rapidly through the melting range.

APPLICATIONS:

Typical applications are the joining of ferrous, nonferrous and dissimilar metals and alloys.

SPECIFICATIONS:

AWS A5.8	BAg-13
ASME	BAg-13
AMS	4772



PRODUCT: **SILVALOY[®] A54N - CONTINUED**
(AWS BAg-13)

AVAILABLE FORMS:

Standard forms of **SILVALOY A54N** are wire, strip, and preforms.

PROPERTIES OF BRAZED JOINTS:

Generally, the joint strength using **SILVALOY A54N** 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 A54N** 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 A54N**.

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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