



235 Kilvert Street
Warwick, RI 02886

A World-Class Quality Partner
ISO 9001:2000
Certified

**PRODUCT: SILVALOY® 50
(AWS BAg-1a)**

COMPOSITION:

Silver	50.0 wt%
Copper	15.5 wt%
Zinc	16.5 wt%
Cadmium	18.0 wt%
Total Other Elements	0.15 wt% Max.

MATERIAL PROPERTIES:

Solidus	1160°F (625°C)
Liquidus	1175°F 635°C)
Brazing Range	1175-1400°F (635-760°C)
Specific Gravity	9.181
Density (T.oz./cu in)	4.838
Electrical Conductivity (% IACS)	23.9
Electrical Resistivity (Michroh-m-cm)	7.00
Color	Light Yellow

DESCRIPTION:

SILVALOY 50 is one of the lower melting brazing alloys composed of silver, copper, zinc and cadmium. It has wide acceptance by industrial users, as well as being included in Federal and Military specifications on brazing filler metals or alloys. It has a narrow melting range which is not apparent in most brazing operations, making it flow freely through a capillary.

APPLICATIONS:

Typical applications are the joining of ferrous, nonferrous and dissimilar metals and alloys with close joint clearances. It is suitable for use on most metals except aluminum and magnesium. It is mainly used for joining steel, stainless steel, copper, copper alloys, nickel, nickel alloys or combinations of these metals.

SPECIFICATIONS:

AWS A5.8	BAg-1a
ASME	BAg-1a
QQ-B-654	Grade IV
AMS	4770



PRODUCT: **SILVALOY[®] 50 - CONTINUED**
(AWS BAg-1a)

AVAILABLE FORMS:

Standard forms of **SILVALOY 50** are wire, strip, and preforms.

PROPERTIES OF BRAZED JOINTS:

Generally, the joint strength using **SILVALOY 50** 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 50** is up to 400°F in continuous service and up to 600°F in intermittent service. Where improved corrosion resistance is needed, **SILVALOY[®] 50N** and **SILVALOY[®] A40N2** are recommended over silver base filler metals not containing nickel.

SAFETY INFORMATION:

SILVALOY 50 contains cadmium and therefore upon heating may produce toxic fumes. 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 further information refer to the Material Safety Data Sheet for **SILVALOY 50**.

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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