



235 Kilvert Street
Warwick, RI 02886

A World-Class Quality Partner
ISO 9001:2008
Registered

**PRODUCT: SILVALOY® 45
(AWS BAg-1)**

COMPOSITION:

Silver	45.0 wt%
Copper	15.0 wt%
Zinc	16.0 wt%
Cadmium	24.0 wt%
Total other elements	0.15 wt% Max.

MATERIAL PROPERTIES:

Solidus	1125°F (607°C)
Liquidus	1145°F (618°C)
Brazing Range	1145-1400°F (618-760°C)
Specific Gravity	9.104
Density (T.oz./cu.in.)	4.798
Electrical Conductivity (% IACS)	27.6
Electrical Resistivity (Michroh-m-cm)	6.06
Color	Light Yellow

DESCRIPTION:

SILVALOY 45 is the lowest melting brazing alloy available composed of silver, copper, zinc and cadmium. It is suitable for use on most metals except aluminum and magnesium. It is used for joining steel, stainless steel, copper, copper alloys, nickel, nickel alloys or combinations of these metals. 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. Silvaloy 45 should be used for close joint clearances (0.000-0.003in).

SPECIFICATIONS:

AWS A5.8	BAg-1
ASME	BAg-1
QQ-B-654	Grade VII
AMS	4769



PRODUCT: **SILVALOY[®] 45 - CONTINUED**
(AWS BAg-1)

AVAILABLE FORMS:

Standard forms of **SILVALOY 45** are wire, strip, and preforms.

SAFETY INFORMATION:

SILVALOY 45 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 more complete information, refer to the Material Safety Data Sheet for **SILVALOY 45**.

PROPERTIES OF BRAZED JOINTS:

Generally, the joint strength using **SILVALOY 45** 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 45** 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 brazing filler metals not containing nickel.

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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