235 Kilvert Street
Warwick, RI 02886

A World-Class Quality Partner
ISO 9001:2000
Certified

PRODUCT: **SILVALOY® 25**
(AWS BAg-27)

COMPOSITION:

Silver	25.0 wt%
Copper	35.0 wt%
Zinc	26.5 wt%
Cadmium	13.5 wt%
Total Other Elements	0.15 wt% Max.

MATERIAL PROPERTIES:

Solidus	1125ºF (605ºC)
Liquidus	1375ºF (745ºC)
Brazing Range	1375-1575ºF (745-860ºC)
Specific Gravity	8.645
Density (toz/cu. in.)	4.556
Electrical Conductivity (% IACS)	29.7
Electrical Resistivity (Michrohm-cm)	5.7
Color	Light Yellow

DESCRIPTION:

SILVALOY 25 is historically a modification of **SILVALOY® 30** with a further reduction in silver content resulting in a higher melting point and a longer melting range (250ºF). It is similar to **SILVALOY 30** in performance although it contains less silver. Its broader melting range is helpful where clearances are not uniform. During melting, **SILVALOY 25** passes from the solid state to a mushy or plastic state and progressively to a liquid. If heated slowly through this plastic state (1125-1375ºF) 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 liquidus temperature of **SILVALOY 25**. For this reason, **SILVALOY 25** should be heated rapidly through the melting range.

APPLICATIONS:

Typical applications are the joining of ferrous, nonferrous and dissimilar metals and alloys with close joint clearances. **SILVALOY 25** is used for brazing steel, stainless steel, copper, copper alloys, nickel, nickel alloys or combinations of these metals.

PRODUCT: **SILVALOY® 25 - CONTINUED (AWS BAg-27)**

SPECIFICATIONS:

AWS A5.8	BAg-27
ASME	BAg-27

AVAILABLE FORMS:

Standard forms of **SILVALOY 25** are wire, strip and preforms.

PROPERTIES OF BRAZED JOINTS:

Generally, the joint strength using **SILVALOY 25** 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 temperatures for **SILVALOY 25** is up to 400ºF in continuous service and up to 600ºF in intermittent service. Where improved corrosion resistance is needed, **SILVALOY® A50N** and **SILVALOY® A40N2** are recommended over silver base filler metals not containing nickel.

SAFETY INFORMATION:

SILVALOY 25 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 25**.

LIABILITY-DISCLAIMER:

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