



235 Kilvert Street
Warwick, RI 02886

A World-Class Quality Partner
ISO 9001:2000
Certified

PRODUCT: SILVALOY® 18M

COMPOSITION:

Silver	18.0 wt%
Copper	75.5 wt%
Phosphorus	6.25 wt%
Total Other Elements	0.15 wt% Max.

MATERIAL PROPERTIES:

Solidus	1190°F (645°C)
Liquidus	1275°F (690°C)
Brazing Range	1275-1350°F (690-732°C)
Specific Gravity	8.235
Density (toz/cu in)	4.340
Electrical Conductivity (% IACS)	6.0
Electrical Resistivity (Michroh-m-cm)	29.0
Color	Light Copper

DESCRIPTION:

SILVALOY 18M is a ternary alloy of silver, phosphorus, and copper approaching the eutectic composition. It is very fluid at brazing temperature and should be used on well fitted joints. **SILVALOY 18M** low brazing temperature and narrow solidus-liquidus range makes it ideal for applications where temperature is a factor and with slow heating rates, such as in furnace brazing.

APPLICATIONS:

SILVALOY 18M is used for joining of copper and copper alloys, such as brass or bronze. It should not be used on ferrous metals or alloys containing more than 10% nickel due to the formation of brittle intermetallic phosphide compounds. On copper to copper applications, it is self-fluxing due to the fluxing action of the phosphorus content. It's low melting temperature makes it ideal for application on copper to brass where temperature and dezincification is a factor.

AVAILABLE FORMS:



Standard Forms of **SILVALOY 18M** are wire, strip and preforms.

PRODUCT: SILVALOY® 18M - CONTINUED

PROPERTIES OF BRAZED JOINTS:

Generally, the joint strength using **SILVALOY 18M** will surpass the strengths of the base metals. Strength is a function of the base metals being joined, design of joint, joint clearance and brazing procedures. The maximum operating temperatures for **SILVALOY 18M** are 400°F (continuous service) and 500°F (short time service). Corrosion resistance is satisfactory except when the joint is in contact with sulfurous atmosphere (especially at elevated temperatures).

SAFETY INFORMATION:

The operation and maintenance of brazing equipment or facility should conform to the provisions of American National Standard ANSI/AWS Z49.1, "Safety in Welding, Cutting, and Allied Processing". For more complete information, refer to the Material Safety Data Sheet for **SILVALOY 18M**.

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.

Wolverine Joining Technologies, LLC
235 Kilvert Street
Warwick, RI 02886
401-739-9550/fax 401-739-9555
www.silvaloy.com