



235 Kilvert Street  
Warwick, RI 02886

A World Class Quality Partner  
ISO 9001:2000  
Certified

**PRODUCT: SILVALOY<sup>®</sup> 2M**

**COMPOSITION:**

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|                      |               |
|----------------------|---------------|
| Silver               | 2.00 wt%      |
| Phosphorus           | 6.50 wt%      |
| Copper               | 91.50 wt%.    |
| Total Other Elements | 0.15 wt% Max. |

**MATERIAL PROPERTIES:**

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|---------------------------------------|-------------------------|
| Solidus                               | 1190°F (645°C)          |
| Liquidus                              | 1465°F (795°C)          |
| Brazing Range                         | 1325-1550°F (718-843°C) |
| Specific Gravity                      | 8.030                   |
| Density (toz/cu in)                   | 4.232                   |
| Electrical Conductivity (% IACS)      | 7.5%                    |
| Electrical Resistivity (Michroh-m-cm) | 22.9%                   |
| Color                                 | Light Copper            |

**DESCRIPTION:**

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**SILVALOY 2M** is extremely fluid at brazing temperatures and will penetrate joint with very little clearance. Best results are obtained with clearances of .001-.003". Melting of **SILVALOY 2M** is virtually complete at 1325°F (718°C). Best results are obtained when brazing slightly above this temperature. The phosphorous content of **SILVALOY 2M** acts as a fluxing agent and no flux is necessary when brazing copper to copper joints. However, when used with one of the other brazeable metals, a brazing flux must be used to promote wetting, bonding, and flow throughout the joint. The flow point of **SILVALOY 2M** is 1325°F (718°C)

**APPLICATIONS:**

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**SILVALOY 2M** is used for the brazing of copper and copper alloys, brass and bronze. It is primarily used for the joining of copper-to-copper on vibration free joints. It is very effective for joining tight fitting copper pipe and tubing. **SILVALOY 2M** should not be used on ferrous metals or alloys containing more than 10% nickel due to the formation of brittle intermetallic phosphide compounds.



**PRODUCT: SILVALOY<sup>®</sup>2M - CONTINUED**

**AVAILABLE FORMS:**

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Standard forms of **SILVALOY 2M** are wire and preforms.

**PROPERTIES OF BRAZED JOINTS:**

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Generally, the joint strength using **SILVALOY 2M** 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 2M** are 300°F (continuous service) and 400°F (short time service). Corrosion resistance is satisfactory except when the joint is in contact with sulfurous atmosphere (especially at elevated temperatures).

**SAFETY INFORMATION:**

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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 2M**.

**LIABILITY-DISCLAIMER:**

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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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