



235 Kilvert Street  
Warwick, RI 02886

*A World-Class Quality Partner*  
**ISO 9001:2008**  
Registered

**PRODUCT:** **SILVALOY® 5F**  
**(AWS BCuP-7)**

### **COMPOSITION:**

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|                      |              |
|----------------------|--------------|
| Silver               | 5.00 wt%     |
| Phosphorous          | 6.75 wt%     |
| Copper               | 88.25 wt%    |
| Total Other Elements | 0.15 wt% Max |

### **MATERIAL PROPERTIES:**

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|                     |                         |
|---------------------|-------------------------|
| Solidus             | 1190°F (643°C)          |
| Liquidus            | 1370°F (743°C)          |
| Brazing Range       | 1300-1475°F (704-802°C) |
| Density (toz/cu in) | 4.231                   |
| Color               | Light Copper            |

### **DESCRIPTION:**

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**SILVALOY 5F** has good flow and wetting properties on copper, brass, and bronze. Its melting characteristics are such that on the low end of its brazing temperature range it has "sluggish" flow characteristics which enable it to fill gaps better, making it ideal for loose-fitting joints. On the other hand, when brazing at high end of its brazing temperature range, it is very fluid, making ideal for tight-fitting joints requiring deep penetration. The phosphorous content of **SILVALOY 5F** 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 5F** is 1300°F (704°C).

### **APPLICATIONS:**

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**SILVALOY 5** is used for the brazing of copper and copper alloys, brass, and bronze. It is primarily used for the joining of copper-to-copper. **SILVALOY 5F** 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® 5F - CONTINUED**  
**(AWS BCuP-7)**

**SPECIFICATIONS:**

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|          |        |
|----------|--------|
| AWS A5.8 | BCuP-7 |
| ASME     | BCuP-7 |
| QQ-B-650 | BCuP-7 |

**PROPERTIES OF BRAZED JOINTS:**

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Generally, the joint strength using **SILVALOY 5** 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 clearance and brazing procedures. The recommended maximum operating temperature for **SILVALOY 5F** 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).

**AVAILABLE FORMS:**

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Standard forms of **SILVALOY 5F** are wire, rings and rods.

**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 5F**.

**LIABILITY-DISCLAIMER:**

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