



235 Kilvert Street
Warwick, RI 02886

A World-Class Quality Partner
ISO 9001:2008
Registered

PRODUCT: **SILVALOY® 6F**
BCuP-4

COMPOSITION:

Silver	6.00 wt%
Phosphorous	7.25 wt%
Copper	86.75 wt%
Total Other Elements	0.15 wt% Maximum

MATERIAL PROPERTIES:

Solidus	1190°F (645°C)
Liquidus	1325°F (720°C)
Brazing Range	1275-1450°F (690°C-788°C)
Density (lb/cu in)	0.294
Color	Light Copper

DESCRIPTION:

SILVALOY 6F is a mid-range silver containing copper phosphorous alloy suitable for wider capillary joint fit up in the range of .003” to .006”. **SILVALOY 6F** has been universally accepted by repair and installation contractors because of its moderate flow with good filleting and gap filling characteristic when the joint fit up dimensions are less than ideal. The phosphorous content of **SILVALOY 6F** 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 6F** is 1275°F (690 °C).

APPLICATIONS:

SILVALOY 6F is used for the brazing of copper and copper alloys, brass, and 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.



PRODUCT: **SILVALOY® 6F - CONTINUED**
BCuP-4

SPECIFICATIONS:

AWS A5.8 BCuP-4

AVAILABLE FORMS:

Standard forms of **SILVALOY 6F** are wire, and preforms.

PROPERTIES OF BRAZED JOINTS:

Generally, the joint strength using **SILVALOY 6F** 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 temperatures for **SILVALOY 6F** 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:

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 6F**.

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