

## SILVALOY® 252 (BRAZE™ 252)

### ***NOMINAL COMPOSITION***

---

Silver	25.0% ± 1.0%
Copper	38.0% ± 1.0%
Zinc	33.0% ± 2.0%
Nickel	2.0% ± 0.5%
Manganese	2.0% ± 0.5%
Other Elements (Total)	0.15% Max

### ***PHYSICAL PROPERTIES***

---

Color	Brass Yellow
Melting Point (Solidus)	1305°F (705°C)
Flow Point (Liquidus) <sup>(1)</sup>	1475°F (800°C)
Brazing Temperature Range	1475°F - 1600°F (800°C - 870°C)
Specific Gravity	8.51
Density (Troy oz/in <sup>3</sup> )	4.48
Electrical Conductivity (%IACS) <sup>(2)</sup>	10.2
Electrical Resistivity (Microhm-cm)	17.2

<sup>(1)</sup> The true liquidus for Silvaloy 252 is 1475°F (800°C), however the alloy will flow freely and make strong joints between 1400°F (705°C)-1475°F (800°C).

<sup>(2)</sup> IACS = International Annealed Copper Standard

### ***PRODUCT USES***

---

Silvaloy 252 is recommended for joining tungsten carbide to steel and stainless steel.

### ***BRAZING CHARACTERISTICS***

---

Silvaloy 252 is a low silver, cadmium-free filler metal, which exhibits excellent flow and wetting characteristics on tungsten carbide, steel and stainless steel. The effective melting range of 1400°F (760°C) - 1475°F (800°C) makes this material free flowing and most effective with narrow gap joints. Recommended brazing range is 1475°F (800°C) - 1600°F (870°C).

### ***PROPERTIES OF BRAZED JOINTS***

---

The properties of a brazed joint are dependent upon numerous factors including base metal properties, joint design, metallurgical interaction between the base metal and the filler metal. Lap joints, in the listed metals, have been tested at room temperature with the following typical results:

	Shear Strength (lbs/in <sup>2</sup> )
Tungsten Carbide/SAE 8740 (heat treated)	24,000 - 26,000
Tungsten Carbide/SAE 4340	28,500

## ***AVAILABLE FORMS***

---

Wire, strip, engineered preforms, specialty preforms per customer specification, powder and paste.

## ***SPECIFICATIONS***

---

Silvaloy 252 alloy conforms to the following specifications:

- American Welding Society (AWS) A5.8/A5.8M BAg-26

## ***APPLICABLE PRODUCT CODE(S)***

---

The applicable Lucas-Milhaupt product code(s) for this technical data sheet: 32-252.

## ***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 252.

## ***WARRANTY CLAUSE***

---

Lucas-Milhaupt, Inc. believes the information contained herein to be reliable. However, the information is given by Lucas-Milhaupt, Inc. without charge and the user shall use such information at its own discretion and risk. This information is provided on an "AS IS" AND "AS AVAILABLE" basis and Lucas-Milhaupt, Inc. specifically disclaims warranties of any kind, either express or implied, including, but not limited to, warranties of title or implied warranties of merchantability or fitness for a particular purpose. No oral advice or written or electronically delivered information given by Lucas-Milhaupt, Inc. or any of its officers, directors, employees, or agents shall create any warranty. Lucas-Milhaupt, Inc. assumes no responsibility for results obtained or damages incurred from the use of such information in whole or in part.