

**SILVALOY<sup>®</sup> 250**  
**(BRAZE<sup>™</sup> 250, SILVALOY<sup>®</sup> A25)**

***NOMINAL COMPOSITION***

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Silver	25.0% ± 1.0%
Copper	52.5% ± 1.0%
Zinc	22.5% ± 1.0%
Other Elements (Total)	0.15% Max

***PHYSICAL PROPERTIES***

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Color	Brass Yellow
Melting Point (Solidus)	1250°F (675°C)
Flow Point (Liquidus)	1575°F (855°C)
Brazing Temperature Range	1575°F - 1675°F (855°C - 912°C)
Specific Gravity	8.77
Density (Troy oz/in <sup>3</sup> )	4.62
Electrical Conductivity (%IACS) <sup>(1)</sup>	24.4
Electrical Resistivity (Microhm-cm)	7.06

<sup>(1)</sup> IACS = International Annealed Copper Standard

***PRODUCT USES***

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Silvaloy 250 is a useful intermediate temperature brazing alloy for joining a variety of ferrous and non-ferrous alloys capable of being heated to 1600°F (870°C) without damage. It has found special use as a bearing surface material on “rubbing” seals in jet engine compressors.

***BRAZING CHARACTERISTICS***

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Silvaloy 250 is an intermediate temperature silver brazing alloy with a long (325°F (180°C)) melting range. It has a tendency to liquefy (i.e. separate into low and high melting constituents) if heated slowly through its melting range. Therefore, it is preferable to use this alloy where the assembly can be heated rapidly to brazing temperature. The long melting range of this alloy is useful when wide gap joints are brazed since it assists in producing larger fillets than more fluid alloys. Where the higher brazing temperature and characteristics of this alloy are permissible, the lower silver content affords a saving. Handy<sup>®</sup> Hi-Temp Flux is recommended for use with this alloy due to the relatively high flow point.

***PROPERTIES OF BRAZED JOINTS***

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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. Butt joints have been brazed and tested for tensile strength at room temperature, on the listed metals, with the following typical results:

	Tensile Strength (lbs/in <sup>2</sup> )	Elongation (% in 2 in.)
Copper	25,000 - 30,000	8.00 - 9.00
Brass	35,000 - 45,000	9.00 - 18.0
Nickel-Silver	35,000 - 40,000	----

## ***SPECIFICATIONS***

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Silvaloy 250 alloy conforms to the following specifications: N/A

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

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The applicable Lucas-Milhaupt product code(s) for this technical data sheet: 32-250, 6791.

## ***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 250.

## ***WARRANTY CLAUSE***

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