

SILVALOY[®] 401 (BRAZE[™] 401, SILVALOY[®] A40)

NOMINAL COMPOSITION

Silver	40.0% ± 1.0%
Copper	30.0% ± 1.0%
Zinc	30.0% ± 2.0%
Other Elements (Total)	0.15% Max

PHYSICAL PROPERTIES

Color	Pale Yellow
Melting Point (Solidus)	1245 °F (675 °C)
Flow Point (Liquidus)	1340 °F (725 °C)
Brazing Temperature Range	1340 °F - 1440 °F (725 °C - 782 °C)
Specific Gravity	8.79
Density (Troy oz/in ³)	4.63
Electrical Conductivity (% IACS) ⁽¹⁾	20.8
Electrical Resistivity (Microhm-cm)	8.30

⁽¹⁾ IACS = International Annealed Copper Standard

PRODUCT USES

Silvaloy 401 is a general purpose, intermediate temperature brazing alloy for use on copper, brass, nickel-silver, bronze and other nonferrous alloys as well as mild steel, stainless steel, nickel and Monel metal.

BRAZING CHARACTERISTICS

Silvaloy 401 is an intermediate temperature filler metal that may be used as a cadmium free substitute for Easy-Flo[®] 30 or used in applications where an intermediate silver-copper-zinc alloy is needed. It liquates moderately, but this property is useful in bridging gaps where poor joint fit-up cannot be avoided. It flows well on steels, copper and copper alloys. The use of Handy[®] Flux or Handy[®] Flux Type B-1 is recommended.

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. Butt joints in the listed metals, have been tested at room temperature with the following average results:

	Tensile Strength (lbs/in ²)	Elongation (% in 2 in.)
Copper	33,700	40.0
1020 Carbon Steel	80,700	20.0
304 Stainless Steel	85,100	2.40

AVAILABLE FORMS

Wire, engineered preforms, specialty preforms per customer specification.

SPECIFICATIONS

Silvaloy 401 alloy conforms to the following specifications:

- Society of Automotive Engineers (SAE) / AMS 4762

APPLICABLE PRODUCT CODE(S)

The applicable Lucas-Milhaupt product code(s) for this technical data sheet: A00000163, Legacy Codes: 32-401, 35582.

Distribution P/N: 98090, 98091, 98092.

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 401.

WARRANTY CLAUSE

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