

SILVALOY® 380
(BRAZE™ 380, SILVALOY® A38T)

NOMINAL COMPOSITION

Silver	38.0% ± 1.0%
Copper	32.0% ± 1.0%
Zinc	28.0% ± 2.0%
Tin	2.0% ± 0.5%
Other Elements (Total)	0.15% Max

PHYSICAL PROPERTIES

Color	Pale Yellow
Melting Point (Solidus)	1200°F (650°C)
Flow Point (Liquidus)	1330°F (720°C)
Brazing Temperature Range	1330°F - 1500°F (720°C - 815°C)
Specific Gravity	9.78
Density (Troy oz/in ³)	4.62
Electrical Conductivity (%IACS) ⁽¹⁾	18.0
Electrical Resistivity (Microhm-cm)	9.50

⁽¹⁾ IACS = International Annealed Copper Standard

PRODUCT USES

Silvaloy 380 is a good general purpose low temperature brazing filler metal for use in cadmium-free brazing applications, such as air conditioning and refrigeration which involve the joining of steels, copper, copper alloys and nickel alloys.

BRAZING CHARACTERISTICS

Silvaloy 380 is a free-flowing, low temperature filler metal with excellent wetting characteristics of most ferrous and non-ferrous base metals, and is a good substitute for cadmium-bearing filler metals with similar silver content. The material is best suited for narrow gap situations (0.001" - 0.005" radial joint clearance). Handy® Flux, Handy® Flux Type B-1 or dispensable Handy® Flux Types D or DB should be used with this filler metal.

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.

	Tensile Strength (lbs/in ²)	Elongation (% in 2 in.)
Low Carbon Steel	55,000 - 65,000	8.00 - 13.0
304 Stainless Steel	80,000 - 85,000	2.00 - 5.00
Copper	31,000 - 35,000	25.0 - 35.0
Brass	35,000 - 45,000	15.0 - 30.0

AVAILABLE FORMS

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

SPECIFICATIONS

Silvaloy 380 alloy conforms to the following specifications:

- American Welding Society (AWS) A5.8/A5.8M BAg-34
- ASME Boiler & Pressure Vessel Code, Sec II-C, SFA-5.8 BAg-34
- Society of Automotive Engineers (SAE) / AMS 4761

APPLICABLE PRODUCT CODE(S)

The applicable Lucas-Milhaupt product code(s) for this technical data sheet: 32-380, 29058.

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 380.

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