

## PREMABRAZE<sup>®</sup> 700

### ***NOMINAL COMPOSITION***

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Gold	70.0% ± 0.5%
Palladium	8.0% ± 0.5%
Nickel	22.0% ± 0.5%
Other Volatile Elements (Each) <sup>(1)</sup>	0.001% Max
Volatile Elements Total (incl. Cd, Zn, Pb)	0.010% Max
Non-Volatile Elements (Total)	0.05% Max

<sup>(1)</sup> Elements with a vapor pressure higher than 10<sup>-7</sup> torr at 932°F (500°C) such as Mg, Sb, K, Li, Ti, S, Cs, Rb, Se, Te, Sr and Ca

### ***PHYSICAL PROPERTIES***

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Color	Gold Gray
Melting Point (Solidus)	1845°F (1007°C)
Flow Point (Liquidus)	1915°F (1046°C)
Brazing Temperature Range	1915°F - 2050°F (1046°C - 1121°C)
Specific Gravity	14.79
Density (Troy oz/in <sup>3</sup> )	7.79
Electrical Conductivity (%IACS) <sup>(2)</sup>	8.50
Electrical Resistivity (Microhm-cm)	20.3

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

### ***PRODUCT USES***

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Premabraz 700 can be used on any of the common ferrous, non-ferrous, and super alloys. Typical applications include brazing of electron tubes, vacuum tubes, wave guides in electronic industry. In aerospace industry, Premabraz 700 can be used in brazing of fuel line assemblies and aero-engine components.

### ***BRAZING CHARACTERISTICS***

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Premabraz 700 is a high strength, high ductility alloy that exhibits higher corrosion and oxidation resistance in comparison to standard gold-copper alloys. The addition of nickel renders this alloy somewhat more sluggish in flow characteristics but improves wettability on ferrous alloys.

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

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The properties of a brazed joint are dependent upon the base metal, joint design and brazing technique. For controlled atmosphere brazing or vacuum brazing the recommended radial joint clearance for gold braze alloys fall within 0.000 in. - 0.002 in. (0.00 mm - 0.05 mm.).

### ***AVAILABLE FORMS***

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

## ***SPECIFICATIONS***

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Premabraz 700 alloy conforms to the following specifications:

- American Welding Society (AWS) A5.8/A5.8M BAu-6
- Society of Automotive Engineers (SAE) / AMS 4786
- ASME Boiler & Pressure Vessel Code, Sec II-C, SFA-5.8 BAu-6
- International Organization for Standardization (ISO) 17672 Au 700

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

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The applicable Lucas-Milhaupt product code(s) for this technical data sheet: A00000302, Legacy Code: 18-700.

## ***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 Premabraz 700.

## ***WARRANTY CLAUSE***

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