

## Lucas-Milhaupt BRAZE 650 (Easy) Silver Based Cadmium Free Filler Metal

Category : Metal , Nonferrous Metal , Precious Metal , Silver Alloy , Solder/Braze Alloy

### Material Notes:

**Characteristics:** This alloy is an intermediate silver brazing filler metal with a slight tendency to liquate (i.e. separate into low and high melting constituents) if heated slowly through their melting ranges. When this filler metal is used for brazing silver base alloys, the remelt temperature is raised by solution of silver in the brazing alloy. Conversely, the remelt temperature of this brazing alloy is lowered by solution of copper when brazing copper base alloys. **Applications:** This brazing filler metal is commonly used in the silversmithing trade and other applications where their silver-white color is advantageous in color-matching, and the corrosion resistance of high-silver, low-zinc alloy is desired. This filler metal is often used in combination to perform sequential or step brazing of adjacent joints, to avoid remelting the previously made joints. Because of its zinc content, this filler metal can be used to join iron and nickel-base alloys.

**Specifications:** This alloy conforms to the following specifications: AWS - A 5.8 BAg-9, ASME Boiler & Pressure Vessel Code Sec. 11-C, SFA 5.8 BAg-9 Information provided by Lucas-Milhaupt, Inc.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Lucas-Milhaupt-BRAZE-650-Easy-Silver-Based-Cadmium-Free-Filler-Metal.php](http://www.lookpolymers.com/polymer_Lucas-Milhaupt-BRAZE-650-Easy-Silver-Based-Cadmium-Free-Filler-Metal.php)

Physical Properties	Metric	English	Comments
Density	9.60 g/cc	0.347 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	172 - 207 MPa	25000 - 30000 psi	Copper butt joint
	241 - 310 MPa	35000 - 45000 psi	Brass butt joint
	379 - 414 MPa	55000 - 60000 psi	Nickel-Silver butt joint
Elongation at Break	13 - 19 %	13 - 19 %	% in 2", Brass butt joint
	20 - 25 %	20 - 25 %	% in 2", Nickel-Silver butt joint
	21 - 27 %	21 - 27 %	% in 2", Copper butt joint

Thermal Properties	Metric	English	Comments
Melting Point	671 - 718.3 °C	1240 - 1325 °F	
Solidus	671 °C	1240 °F	Melting Point
Liquidus	718.3 °C	1325 °F	Flow Point

Component Elements Properties	Metric	English	Comments
Copper, Cu	19 - 21 %	19 - 21 %	
Other, total	<= 0.15 %	<= 0.15 %	

Component Elements Properties	Metric	English	Comments
Zinc, Zn	13 - 17 %	13 - 17 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.00000810 ohm-cm	0.00000810 ohm-cm	

Descriptive Properties	Value	Comments
Color	White	
Corrosion Resistance	10.4 Mgs/dcm <sup>2</sup> /Day	20% Sulphuric Acid, room temperature, constant immersion
	17.9 Mgs/dcm <sup>2</sup> /Day	10% Sulphuric Acid, room temperature, constant immersion
	21.2 Mgs/dcm <sup>2</sup> /Day	5% Sulphuric Acid, room temperature, constant immersion
	40.3 Mgs/dcm <sup>2</sup> /Day	10% Sulphuric Acid, 95°C, in vapors
	61.9 Mgs/dcm <sup>2</sup> /Day	5% Sulphuric Acid, 70°C, contact immersion
	63.9 Mgs/dcm <sup>2</sup> /Day	20% Sulphuric Acid, 70°C, constant immersion
	93 Mgs/dcm <sup>2</sup> /Day	10% Sulphuric Acid, 70°C, constant immersion
	None	1% Sulphuric Acid, 95°C, in vapors

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