

## Lucas-Milhaupt Premabraz 616 Silver Based Cadmium Free Filler Metal

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

### Material Notes:

**Applications:** Application is found in all types of moderate temperature low pressure systems, and in particular the electronic vacuum tube.

**Characteristics:** Premabraz 616 is a low temperature, slightly sluggish brazing filler metal with a tendency to liquate (i.e. separate into low and high melting constituents) if heated slowly through their melting range. This low vapor pressure brazing filler metal was formulated to meet the need for a composition free from volatile constituents, particularly in the brazing of vacuum tubes. This filler metal can be successfully used in hydrogen, inert atmospheres or vacuum without flux. The indium content improves their wetting tendency on ferrous alloys over that obtainable with binary silver-copper. Some nickel base alloys are susceptible to stress cracking. To prevent this the parts should be stress-relieved prior to brazing. Special attention should also be given to dissimilar metal joints where stresses can occur from differences in thermal expansion. **Specifications:** Premabraz 616 conforms to AWS A5-8, BVAg-29, Grade 2. Information provided by Lucas-Milhaupt, Inc.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Lucas-Milhaupt-Premabraz-616-Silver-Based-Cadmium-Free-Filler-Metal.php](http://www.lookpolymers.com/polymer_Lucas-Milhaupt-Premabraz-616-Silver-Based-Cadmium-Free-Filler-Metal.php)

Physical Properties	Metric	English	Comments
Specific Gravity	9.85 g/cc	9.85 g/cc	

Thermal Properties	Metric	English	Comments
Melting Point	623.9 - 707.2 Â°C	1155 - 1305 Â°F	
Solidus	623.9 Â°C	1155 Â°F	Melting Point
Liquidus	707.2 Â°C	1305 Â°F	Flow Point

Component Elements Properties	Metric	English	Comments
Cadmium, Cd	<= 0.0020 %	<= 0.0020 %	
Carbon, C	<= 0.0050 %	<= 0.0050 %	
Copper, Cu	>= 22.167 %	>= 22.167 %	
Indium, In	14 - 15 %	14 - 15 %	
Lead, Pb	<= 0.0020 %	<= 0.0020 %	
Other, each	<= 0.0020 %	<= 0.0020 %	
Other, total	<= 0.30 %	<= 0.30 %	
Phosphorous, P	<= 0.020 %	<= 0.020 %	
Silver, Ag	60.5 - 62.5 %	60.5 - 62.5 %	

Zinc, Zn	<= 0.0020 %	<= 0.0020 %	
Component Elements Properties	Metric	English	Comments

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000107 ohm-cm	0.0000107 ohm-cm	

Processing Properties	Metric	English	Comments
Processing Temperature	707.2 - 788 Â°C	1305 - 1450 Â°F	Brazing Range

Descriptive Properties	Value	Comments
Color	Silver-White	

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