

## Lucas-Milhaupt SIL-FOS 18 Silver/ Copper/ Phosphorus Alloy

Category : Metal , Nonferrous Metal , Copper Alloy , Solder/Braze Alloy

### Material Notes:

**Applications:** Sil-Fos 18 is a moderate cost brazing filler metal suitable for joining copper, brass and bronze alloys where low brazing temperature and free flowing characteristics are required. It should be used on assemblies where good fitup can be maintained.

**Characteristics:** Sil-Fos 18 is a ternary eutectic, low temperature brazing filler metal that is free flowing and self-fluxing on copper and some high copper copper alloys by virtue of its phosphorus content. Brass and most bronzes require the use of Handy Flux (or Handy Flux Type A-1 on Aluminum Bronze or Beryllium Copper) for good wetting. This alloy becomes extremely fluid above its melting point. With most joint designs a clearance of .001" to .003" (.025mm-.075mm) is desirable. Sil-Fos 18 should not be used on ferrous metals or nickel base alloys, since the phosphorus diffuses and produces brittle iron or nickel phosphides at the joint interface. Information provided by Lucas-Milhaupt, Inc.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Lucas-Milhaupt-SIL-FOS-18-Silver-Copper-Phosphorus-Alloy.php](http://www.lookpolymers.com/polymer_Lucas-Milhaupt-SIL-FOS-18-Silver-Copper-Phosphorus-Alloy.php)

Physical Properties	Metric	English	Comments
Density	8.11 g/cc	0.293 lb/in <sup>3</sup>	

Thermal Properties	Metric	English	Comments
Melting Point	643 Â°C	1190 Â°F	
Solidus	643 Â°C	1190 Â°F	Melting Point
Liquidus	643 Â°C	1190 Â°F	Flow Point

Component Elements Properties	Metric	English	Comments
Copper, Cu	>= 75.15 %	>= 75.15 %	
Other, total	<= 0.15 %	<= 0.15 %	
Phosphorous, P	6.3 - 6.7 %	6.3 - 6.7 %	
Silver, Ag	17.2 - 18 %	17.2 - 18 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000294 ohm-cm	0.0000294 ohm-cm	

Descriptive Properties	Value	Comments
Color	Gray	

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