SONGHAN Plastic Technology Co., Ltd.

## Lucas-Milhaupt Silvalite Brazing Alloy

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

#### Material Notes:

SILVALITE is used for the brazing of copper and copper alloys, brass and bronze. It can also be used on silver, tungsten and molybdenum. It is primarily used for the joining of copper-to-copper on vibration free joints. It is very effective for joining tight fitting copper pipe and tubing. SILVALITE should not be used on ferrous metals or copper alloys containing more than 10% nickel because of phosphorus embrittlement due to reactions with iron or nickel. Its melting characteristics are such that on the low end of its brazing temperature range it has "sluggish†flow characteristics which enable it to fill gaps better, making it ideal for loose-fitting joints. On the other hand, when brazing at high end of its brazing temperature range, it is very fluid, making ideal for tight-fitting joints required deep penetration. Melting of SILVALITE is virtually complete at 1350ŰF (732ŰC). Best results are obtained when brazing slightly above this temperature.Applications:The phosphorous content of SILVALITE acts as a fluxing agent and no flux is necessary when brazing copper to copper joints. However, when used with a copper alloy or one of the other brazeable metals, a brazing flux must be used to promote wetting, bonding, and flow throughout the joint. The flow point of SILVALITE is 1350ŰF (732ŰC).Information provided by Lucas-Milhaupt Warwick, LLC (formerly Wolverine Joining Technologies).

#### Order this product through the following link:

http://www.lookpolymers.com/polymer\_Lucas-Milhaupt-Silvalite-Brazing-Alloy.php

Physical Properties	Metric	English	Comments
Specific Gravity	7.986 g/cc	7.986 g/cc	
Density	8.00 g/cc	0.289 lb/in³	

Thermal Properties	Metric	English	Comments
Melting Point	643 - 799 °C	1190 - 1470 °F	
Solidus	643 °C	1190 °F	
Liquidus	799 °C	1470 °F	
Maximum Service Temperature, Air	149 °C	300 °F	continuous
	204 °C	400 °F	intermittent

Component Elements Properties	Metric	English	Comments
Copper, Cu	91.15 - 92.1 %	91.15 - 92.1 %	As balance
Other, total	<= 0.15 %	<= 0.15 %	
Phosphorous, P	6.6 - 7.0 %	6.6 - 7.0 %	
Silver, Ag	1.3 - 1.7 %	1.3 - 1.7 %	

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Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000315 ohm-cm	0.0000315 ohm-cm	
Processing Properties	Metric	English	Comments
Processing Temperature	732 - 799 °C	1350 - 1470 °F	Brazing Temperature
Descriptive Properties		Value	Comments
Color		Light Copper	
Electrical Conductivity (% IACS)		5.5	

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