

FOS-FLO® 671

NOMINAL COMPOSITION

Tin	6.70% - 7.20%
Phosphorus	6.00% - 6.40%
Nickel	1.25% - 1.75%
Copper	Balance
Other Elements (Total)	0.15% Max

PHYSICAL PROPERTIES

Color	Light Brown
Melting Point (Solidus)	1134°F (612°C)
Flow Point (Liquidus)	1260°F (682°C)
Brazing Temperature Range	1260°F - 1360°F (682°C - 737°C)
Specific Gravity	7.11
Density (lbs/in ³)	.257
Electrical Conductivity (%IACS) ⁽¹⁾	N/A
Electrical Resistivity (Microhm-cm)	N/A

⁽¹⁾ IACS = International Annealed Copper Standard

PRODUCT USES

Fos-Flo 671 is economical brazing filler metal suitable for joining copper to copper and copper to copper alloys where critical impact or vibration stresses are not encountered in service. This alloy was developed for use where close fit-ups cannot be maintained.

BRAZING CHARACTERISTICS

Fos-Flo 671 is a copper rich, low temperature, brazing filler metal that is free flowing. Because of Nickel content this alloy proves to have good gap filling abilities. The self-fluxing property of Fos-Flo 671 is effective on copper only. Copper base alloys, such as brass or bronze, may be brazed with Fos-Flo 671 if the joints are coated with Handy Flux®. The alloy should not be used on ferrous metals or nickel base alloys, since the phosphorus produces brittle iron or nickel phosphides at the joint interface.

PROPERTIES OF BRAZED JOINTS

Joints made with Fos-Flo 671 are entirely satisfactory on copper and copper alloys if good fit-up and adequate shear area are maintained. If poor fit-up prevails, or shear area is marginal, a lower phosphorus content silver-copper-phosphorus filler metal such as Sil-Fos® 15 or Sil-Fos® 5 may be preferred, particularly if the joints are to be subjected to impact or vibration in service.

CORROSION RESISTANCE

The corrosion resistance of Fos-Flo 671 is comparable to that of copper except when exposed to sulfur compounds, sulfur-containing gas or oil, especially at elevated temperatures. Under these conditions Fos-Flo 671 undergoes progressive corrosive deterioration, and should not be used.

AVAILABLE FORMS

Powder and paste.

SPECIFICATIONS

Fos-Flo 671 alloy conforms to the following specifications: N/A

APPLICABLE PRODUCT CODE(S)

The applicable Lucas-Milhaupt product code(s) for this technical data sheet: 69-028.

SAFETY INFORMATION

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 Fos-Flo 671.

WARRANTY CLAUSE

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