

## Lead-Free Solder Wire For High Reliability Soldering

### Product Description

For soldering applications that require maximum reliability of solder joints, especially for surface mounted components, only solder of the highest purity is acceptable. Kester Solder does not make any vague claims of outstanding solder purity. Complete analyses of Kester Lead-Free Solder Wire prove that every batch conforms to the strictest quality control standards in the solder industry.

### Maximum Allowed Impurities

Kester Lead-Free Solder Wire meets IPC Specifications J-STD-006A.

Impurities	Symbol	ANSI/IPC J-STD-006A
Tin <sup>1</sup>	Sn	0.250
Silver <sup>1</sup>	Ag	0.100
Copper <sup>1</sup>	Cu	0.080
Antimony <sup>2</sup>	Sb	0.200
Gold	Au	0.050
Aluminum	Al	0.005
Cadmium	Cd	0.002
Zinc	Zn	0.003
Bismuth	Bi	0.100
Arsenic	As	0.030
Iron	Fe	0.020
Nickel	Ni	0.010
Indium	In	0.100
Lead <sup>2</sup>	Pb	0.050

<sup>1</sup> When not specified as an alloy composition

<sup>2</sup> Conform as variation E alloys per J-STD-006A

- For alloy composition, Copper (Cu) and silver (Ag) content of the solder shall be maintained within  $\pm 0.20\%$  of the nominal alloy composition being used, when alloy component  $\leq 5.0\%$ . Otherwise, the allowable tolerance range is  $\pm 0.50\%$ . The balance of the solder shall be Tin and/or the items listed above.

Kester Solder purchased directly or through stocking distributors will conform to these requirements. Only highest purity virgin metals are used to make Kester Lead-Free Solder Wire. There is no requirement that antimony must be included in solder. Kester does not recommend the inclusion of antimony unless required by specifications. DOD-STD-2000-1A (Soldering Technology High Quality/High Reliability) states that it is the responsibility of the manufacturer to select those materials and processes that will produce acceptable high quality/high reliability products.

## Available Alloys

Alloy	Melting Point
Sn95.8Ag3.5Cu0.7	217°C (423°F)
Sn96.5Ag3.5	221°C (430°F)
Sn96.5Ag3.0Cu0.5	217-220°C (423-428°F)
Sn99.0Ag0.3Cu0.7	217-227°C (423-441°F)
Sn99.3Cu0.7	227°C (441°F)
Sn100	232°C (450°F)

Other lead-free alloy compositions may be available. Consult your local Kester sales representative.

### Storage and Shelf Life:

Kester Lead-Free Solid Solder Wire has no limited shelf life when handled properly. Storage must be in a dry, non-corrosive environment. The solder surface may lose its shine and appear a dull shape of gray. This is a surface phenomenon and is not detrimental to product functionality. Flux cored solder wire has a shelf life of 3 years from the date of manufacture.

### Health & Safety:

This product, during handling or use, may be hazardous to health or the environment. Read the Material Safety Data Sheet and warning label before using this product.

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