



Lead-Free Solid 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 does not make any vague claims of understanding solder purity. Only the highest virgin metals are used to make Kester Solder Wire. Complete analyses of Kester Solder Wire prove that every bath conforms to the strictest quality controls in the solder industry.

Maximum Allowed Impurities

Kester Solder Wire meets IPC Specifications J-STD-006C.

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

¹ For variation A, B and C alloys, the Sb maximum is 0.50%, 0.20% and 0.05%, respectively per J-STD-006C.

² Conform as variation E alloys per J-STD-006C.

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. 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.

RoHS Compliance

This product meets the requirements of the Restriction of Hazardous Substances (RoHS) Directive, 2015/863 for the stated banned substances.

Availability

Alloy	Melting Point
Sn95.8Ag3.5Cu0.7	217° (423°F)
Sn96.5Ag3.5	221° (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° (441°F)
Sn100	232° (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. Over time, the surface of wire may lose its shine and appear a dull shade of gray. This is a surface phenomenon and is not detrimental to product functionality.

The expiration date determined by the date of manufacture printed on the product and Certificate of Analysis will represent the manufacturer's warranty period which is the time frame wherein Kester will replace defective product. Flux-cored solder wires with alloys containing more than 70% lead have a 2 year warranty from the date of manufacture. All other alloys have a 3 year warranty from the date of manufacture.

Health and Safety

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