

Kester K100LD Solder Wire

LEAD-FREE ULTRAPURE®

(Patent-Pending)



K100LD solder wire is designed for lead-free hand-soldering and rework applications. K100LD is a new patent pending alloy developed for hand-soldering operations; the alloy is composed of tin-copper-nickel and another element to reduce leaching of metals during soldering and to give enhanced wetting performance.

K100LD solder wire is available in the following no-clean and water washable fluxes to tackle any lead-free assembly with ease and reliability.

Recommended Kester Cored Wire

- Kester flux 275 no-clean, core 66 with 3% flux concentration
- Kester flux 48 rosin activated, core 66 with 3% flux concentration
- Kester flux 331 water washable, core 66 with 3% flux concentration

UltraPure® K100LD Wire Key Attributes

Compatibility with Lead-Free Metallizations

K100LD will perform well with all types of component and board metallizations. This reduces de-wetting or non-wetting defects and offers good spread and wicking of solder.

Solder Joint Cosmetics

K100LD offers exceptionally bright and smooth solder joints with very low shrinkage effects similar to the Sn63Pb37 alloy. The shininess of the alloy makes the inspection of K100LD joints no different than the traditional process; this reduces the time required to retrain operators.

Lowest Dissolution of Copper

K100LD minimizes the dissolution of copper from parts and boards. The reduced copper dissolution will help preserve the metallization of parts that are being soldered.

Wetting Behavior

The K100LD alloy is designed to give excellent wetting of lead-free parts but as with all other lead-free alloys the wetting speed may be reduced slightly when compared to Sn63Pb37. Proper flux selection and soldering technique will ensure good results.

Lowest Cost Lead-Free Alloy

K100LD is a Tin-Copper based material without any intentionally added Silver. When compared to SAC305, the lack of silver in K100LD results in a lower material cost.

Low Lead Contamination

K100LD is manufactured with a lead content of less than 0.05% to help insure compliance to RoHS regulation limits.

Flux Compatibility

K100LD solder wires contain the optimized percentage of flux to enable good wetting. Lead-free solders wet more slowly than Sn63Pb37 and flux content is one of the critical parameters which enables good lead-free soldering. Also Kester fluxes do not char readily since they are designed for the higher soldering temperatures used with lead-free.

Lead-Free Soldering Tips

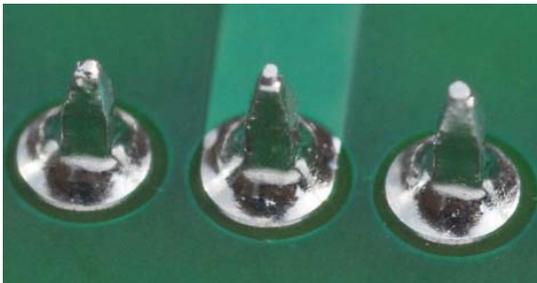
Due to the slower wetting behavior of lead-free solders proper equipment and soldering technique is essential to ensure rapid, reliable soldering.

The following will help in achieving the desired results when hand-soldering with K100LD:

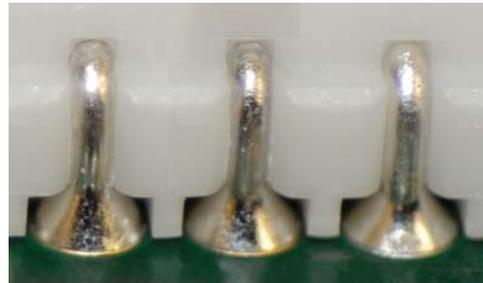
- Use the correct tip geometry
- Use soldering tip temperatures between 700-800°F
- Increase contact times slightly
- Always use the correct flux percentage in the wire (3% recommended with K100LD)
- Use the correct wire diameter for the application

In the hand-soldering operation do the following to insure a problem free assembly:

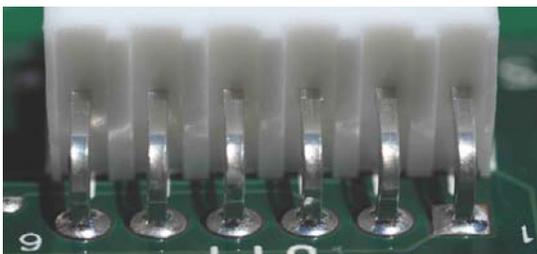
- Always use lead-free tips
- Reduce or turn off soldering stations when not in use
- Avoid the excess use of liquid flux
- Avoid lead contamination; segregate lead-free and leaded areas
- Keep tip well tinned
- Avoid the use of abrasive tip cleaners
- Tip life may be reduced; change worn tips regularly



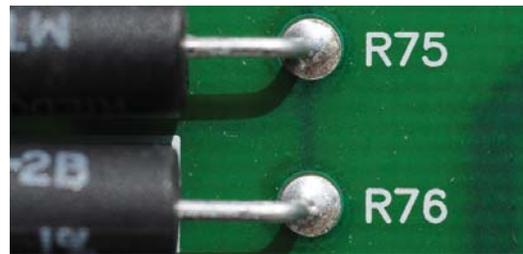
Bottom-side bright solder joints obtained with K100LD



Top-side complete hole-fill using K100LD



K100LD bright solder joints and free of shrinkage effects



Good wetting and good cosmetics with K100LD



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