

# Ultrasure<sup>®</sup> High Reliability Extruded Bar Solder

Lead-bearing and Lead-free alloys

## Product Description

For soldering applications which 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 outstanding solder purity. Complete analysis of Kester Ultrasure<sup>®</sup> Bar Solders prove that every batch conforms to the strictest quality control standards in the solder industry.

## Maximum Allowed Impurities

Kester Ultrasure<sup>®</sup> Bar Solder substantially exceeds the requirements of current industry standards for allowable impurity requirements.

| Element  | J-STD-006B | Kester E-Bar | Kester Ultrasure <sup>®</sup> | Ultra Low Dross | Ultrasure <sup>®</sup> HAL |
|----------|------------|--------------|-------------------------------|-----------------|----------------------------|
| Copper   | 0.080      | 0.020        | 0.015                         | 0.015           | 0.001                      |
| Gold     | 0.050      | 0.002        | 0.002                         | 0.002           | 0.001                      |
| Antimony | 0.050      | 0.050        | 0.050                         | 0.050           | 0.010                      |
| Cadmium  | 0.002      | 0.001        | 0.001                         | 0.001           | 0.001                      |
| Zinc     | 0.003      | 0.001        | 0.001                         | 0.001           | 0.001                      |
| Aluminum | 0.005      | 0.002        | 0.002                         | 0.002           | 0.001                      |
| Iron     | 0.020      | 0.010        | 0.010                         | 0.010           | 0.003                      |
| Arsenic  | 0.030      | 0.020        | 0.020                         | 0.020           | 0.001                      |
| Bismuth  | 0.100      | 0.025        | 0.020                         | 0.020           | 0.003                      |
| Silver   | 0.100      | 0.003        | 0.002                         | 0.002           | 0.001                      |
| Nickel   | 0.010      | 0.002        | 0.002                         | 0.002           | 0.001                      |
| Indium   | 0.100      | 0.007        | 0.007                         | 0.007           | 0.002                      |
| Lead     | 0.100      | 0.050        | 0.050                         | 0.050           | 0.050                      |

Kester Ultrasure<sup>®</sup> will conform to these requirements when purchased directly or through stocking distributors. Only the highest purity virgin metals are used to make Kester Ultrasure<sup>®</sup>. Kester is the only manufacture of Ultrasure<sup>®</sup> quality solder. Kester Ultrasure<sup>®</sup> meets or exceeds Industry Specification ASTM B32. Kester Ultrasure<sup>®</sup> conforms to the requirements of J-STD-006 formerly QQ-S-571F. 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

|                     | Melting Point         |
|---------------------|-----------------------|
| <b>Lead-bearing</b> |                       |
| Sn63Pb37            | 183°C (361°F)         |
| Sn60Pb40            | 183-190°C (361-374°F) |
| <b>Lead-free</b>    |                       |
| K100                | ~227°C (441°F)        |
| Sn96.5Ag3.5         | 221°C (430°F)         |
| Sn96.5Ag3.0Cu0.5    | 217-220°C (423-428°F) |
| Sn95.5Ag3.8Cu0.7    | 217-221°C (423-430°F) |
| Sn99.3Cu0.7         | 227°C (441°F)         |
| Sn100               | 232°C (450°F)         |

### Storage and Shelf Life:

Kester Ultrapure® solder 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 shade of gray. This is a surface phenomenon and is not detrimental to product functionality.

### 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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