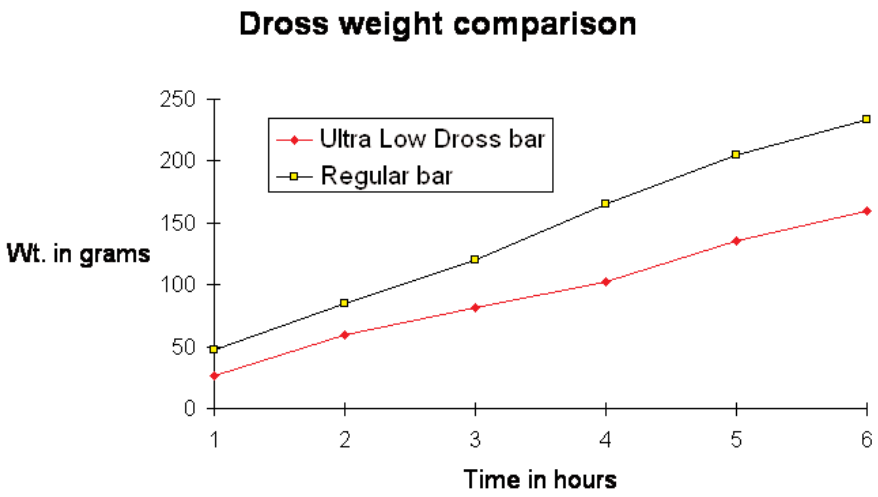
# Ultra-Low Dross

## Extruded Bar Solder Using Low Dross Technology

## Product Description

Kester Ultra-Low Dross Bar Solder was developed to provide lower dross in wave solder, selective solder and dip solder processes. This product is a step above our Ultrapure® line of bar solder.




Results are based on an “in-house” experiment using an aerated 2000 gram solder pot at 260 °C (500 °F).

### Available Alloys with Low Dross Properties

Sn63Pb37

## Process Information

Many solder impurities have been known to contribute to dross formation. Kester Ultra Low Dross integrates low dross technology with Kester’s extruded bar manufacturing process. To minimize oxidation and alloy segregation, Kester pours and quick chills ingots of solder alloy. The ingot is inserted into an airtight hydraulic press which then extrudes bars in a highly efficient and automated manner.

Kester suggests, as with all our products, that this is purchased directly or through stocking distributors. Kester is the only manufacturer of Ultrapure and Ultrapure Low Dross quality solder. Both conform to the requirements of J-STD-006C (formerly QQ-S-571F).

**Maximum Allowed Impurities**

Ultrapure meets the requirements of current industry standards for allowable impurity requirements.

| Element | J-STD-006C | Kester Ultapure | Ultra Low Dross |
|---|---|---|---|
| Tin | Component | 63.500 | 63.500 |
| Lead | Component | Balance | Balance |
| Antimony | 0.200 | 0.200 | 0.050 |
| Copper | 0.080 | 0.080 | 0.015 |
| Gold | 0.050 | 0.050 | 0.002 |
| Aluminum | 0.005 | 0.005 | 0.002 |
| Cadmium | 0.002 | 0.002 | 0.001 |
| Zinc | 0.003 | 0.003 | 0.001 |
| Silver | 0.100 | 0.100 | 0.050 |
| Bismuth | 0.100 | 0.100 | 0.020 |
| Arsenic | 0.030 | 0.030 | 0.020 |
| Iron | 0.020 | 0.020 | 0.010 |
| Indium | 0.100 | 0.100 | 0.007 |
| Nickel | 0.010 | 0.010 | 0.002 |

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. Except where otherwise indicated, the component elements in each alloy shall deviate from their nominal mass percentage by not >0.10% of the alloy mass when their nominal percentage is ≤ 1.0%; by not > 0.20% of the alloy mass when their nominal percentage is > 1.0% to ≤ 5.0% or by not > 0.50% when their nominal percentage is > 5.0%.

## Storage, Handling and Shelf Life

Storage must be in a dry, non-corrosive environment between 10 to 40 °C (50 to 104 °F). The surface may lose its shine and appear a dull shade of grey. This is a surface phenomenon and is not detrimental to product functionality. Solder bar has a shelf life determined by the alloy used in the bar. For alloys containing more than 70% lead, the shelf life is 2 years from the date of manufacture. Other alloys have a shelf life of 3 years 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 and warning label before using this product. Safety Data Sheets are available at https://www.kester.com/downloads/sds.

## Contact Information

To confirm this document is the most recent version, please contact Assembly@MacDermidAlpha.com


| North America | Europe | Asia Pacific |
|---|---|---|
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Also read carefully warning and safety information on the Safety Data Sheet. This data sheet contains technical information required for safe and economical operation of this product. READ IT THOROUGHLY PRIOR TO PRODUCT USE. Emergency safety directory assistance: US 1 202 464 2554, Europe + 44 1235 239 670, Asia + 65 3158 1074, Brazil 0800 707 7022 and 0800 172 020, Mexico 01800 002 1400 and (55) 5559 1588