KESTER® ULTRAPURE HIGH-RELIABILITY SOLDER

Solder for Lead-bearing and Lead-free Alloys

DESCRIPTION

For soldering applications which require maximum reliability of solder joints, especially for surface mounted components, only solder of the highest purity is acceptable. MacDermid Alpha does not make any vague claims of outstanding solder purity. Complete analysis of Kester® bar and wire solders prove that every batch conforms to the strictest quality control standards in the solder industry.

Maximum Allowed Impurities

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

Element	J-STD-006C	Kester Ultrapure (Lead-Free)	Kester Ultrapure (Leaded)
Tin	Component	Balance	63.500
Lead	0.070 or Component	0.070	Balance
Antimony	0.200 or Component	0.200	0.200
Copper	0.080 or Component	0.080	0.080
Gold	0.050	0.050	0.050
Aluminum	0.005	0.005	0.005
Cadmium	0.002	0.002	0.002
Zinc	0.003	0.003	0.003
Silver	0.100 or Component	0.100	0.100
Bismuth	0.100	0.100	0.100
Arsenic	0.030	0.030	0.030
Iron	0.020	0.020	0.020
Indium	0.100	0.100	0.100
Nickel	0.010	0.010	0.010

Ultrapure will conform to these requirements when purchased directly or through stocking distributors. Kester is the only manufacturer of Ultrapure quality solder. Ultrapure conforms to the requirements of J-STD-006C 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. Except where otherwise indicated, the component elements in each alloy shall deviate from their nominal mass percent- age 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%.

AVAILABILITY ALLOY

Ultrapure meets the requirements of current industry standards for allowable impurity requirements. Below is a list of typical leaded and lead-free alloys produced by Kester in bar and wire form. Other alloys can be produced and follow the same requirements.

Leaded Alloys	Meting Point
Sn62Pb36Ag2	179 to 183 °C (354 to 361 °F)
Sn63Pb37	183 °C (361 °F)
Sn60Pb40	183 to 190 °C (361 to 374 °F)
Sn10Pb88Ag2	268 to 299 °C (514 to 570 °F)
Sn5Pb92.5Ag2.5	280 °C (536 °F)

Lead-Free Alloys	Meting Point
Sn96.5Ag3.0Cu0.5	217 to 220 °C (423 to 428 °F)
Sn96.5Ag3.5	221 °C (430 °F)
Sn97Ag3	221 to 224 °C (430 to 435 °F)
K100LD	~227 °C (441 °F)
Sn99.3Cu0.7	227 °C (441 °F)
Sn100	232 °C (450 °F)
Sn95Sb5	232 to 240 °C (450 to 464 °F)

RECYCLING SERVICES

We provide safe and efficient recycling services to help companies meet their environmental and legislative requirements and at the same time, maximize the value of their waste streams.

Our service collects solder dross, solder scrap, and various forms of solder paste waste. Please contact your local sales representative for recycling capabilities in your area.

STORAGE, HANDLING AND SHELF LIFE

See ALPHA and Kester Solid Solder Storage, Handling and Shelf Life document for more information.

SAFETY & WARNING

It is recommended that the company/operator read and review the Safety Data Sheets for the appropriate health and safety warnings before use. **Safety Data Sheets are available.**

CONTACT INFORMATION

www.macdermidalpha.com

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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