KESTER® 275 FLUX-CORED WIRE

No-Clean Cored Wire for Lead-free and Leaded Alloys

DESCRIPTION

Kester 275 Flux-Cored Wire is designed to provide superior wetting performance for hand soldering in the electronics industry. The chemistry is based on some of the same principles that have been safely used for years in mildly activated rosin fluxes. The use of 275 results in an extremely clear post-soldering residue without cleaning. The unique chemistry in 275 was also designed to reduce spattering common to most core fluxes. 275 can be used for both lead-free and leaded soldering. For a list of compatible products contact MacDermid AlphaTechnical Support.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

FEATURES & BENEFITS

- Colorless translucent residues
- Improves wetting performance
- Excellent solderability and fast wetting to a variety of surface finishes
- Eliminates the need and expense of cleaning
- Low smoke and odor
- Low spattering
- Compatible with lead-free and leaded alloys
- Classified as ROL0 per J-STD-004
- Compliant to Bellcore GR-78

ROHS COMPLIANCE

This product meets the requirements of the Restriction of Hazardous Substances (RoHS) Directive, 2011/65/EU for the stated banned substances. (Applies only if this core flux is combined with a lead-free alloy.)

TECHNICAL DATA

<table>
<tr><th>Category</th><th>Results</th><th>Procedure/Remarks</th></tr>
<tr><td colspan="3">Reliability Properties</td></tr>
<tr><td>Copper Mirror Corrosion</td><td>Low</td><td>Tested to J-STD-004, IPC-TM-650, Method 2.3.32</td></tr>
<tr><td>Corrosion Test</td><td>Low</td><td>Tested to J-STD-004, IPC-TM-650, Method 2.6.15</td></tr>
<tr><td>Silver Chromate</td><td>Pass</td><td>Tested to J-STD-004, IPC-TM-650, Method 2.3.33</td></tr>
<tr><td>Chloride and Bromides</td><td>None Detected</td><td>Tested to J-STD-004, IPC-TM-650, Method 2.3.35</td></tr>
<tr><td>Fluorides by Spot Test</td><td>Pass</td><td>Tested to J-STD-004, IPC-TM-650, Method 2.3.35.1</td></tr>
<tr><td>Spread Test (Typical)</td><td colspan="2">Tested to J-STD-004, IPC-TM-650, Method 2.4.46
<table>
<tr><th></th><th colspan="2">Area of Spread
mm² (in²)</th></tr>
<tr><th>Flux-Cored Solder</th><th>Sn96.5Ag3.0Cu0.5</th><th>Sn63Pb37</th></tr>
<tr><td>285 Mildly Activated Rosin</td><td>213 (0.33)</td><td>335 (0.52)</td></tr>
<tr><td>245 No-Clean</td><td>200 (0.31)</td><td>348 (0.54)</td></tr>
<tr><td>275 No-Clean</td><td>219 (0.34)</td><td>361 (0.56)</td></tr>
</table></td></tr>
<tr><td>Surface Insulation Resistance (SIR), IPC (Typical)</td><td>Pass</td><td>Tested to J-STD-004, IPC-TM-650, Method 2.6.3.3
Test Conditions: 85 °C, 85% RH, 7 days, 100V</td></tr>
<tr><td>Surface Insulation Resistance (SIR) 40 °C/90% RH, IPC (Typical)</td><td>Pass</td><td>Tested to J-STD-004B, IPC-TM-650, Method 2.6.3.7</td></tr>
</table>

PROCESSING GUIDELINES

Solder iron tip temperatures are most commonly between 315 to 343 °C (600 to 650 °F) for Sn63Pb37 and Sn62Pb36Ag02 alloys, and between 371 to 400 °C (700 to 750 °F) for lead-free alloys. Heat both the land area and component lead to be soldered with the iron prior to touching the land with the cored wire. Do not apply the wire directly to the soldering iron tip. If needed, 959T or 985M no clean flux may be used as a compatible liquid flux to aid in reworking soldered joints. 959T is available as a Flux-Pen® for optimum board cleanliness.

Cleaning

The 275 flux residues are non-corrosive, non-conductive and do not require removal in most applications. IPA will not clean the residues off the surface of the circuit board after the soldering process. A saponifier or cleaning agent specifically designed to clean a no-clean flux is required to clean the residues. Please contact MacDermid Alpha Technical Support for further information.

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. Flux-cored solder wire has a shelf life determined by the alloy used in the wire. 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.

AVAILABILITY

275 is available in a wide variety of alloys, wire diameters and flux percentages. For most applications, Sn63Pb37, Sn96.5Ag3.0Cu0.5 or K100LD is used.

Note: Core Size 50, 58 and 66 = 1.1%, 2.2% and 3.3% flux core.

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.

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