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MacDermid Alpha ELECTRONICS SOLUTIONS

TECHNICAL DATA SHEET

KESTER® 186 FLUX-PEN®

Mildly Activated Rosin Flux-Pen for Leaded and Lead-free Alloys

DESCRIPTION

Kester 186 Flux-Pen is specifically designed for leaded and lead-free rework of conventional and surface mount circuit board assemblies. 186 Flux-Pen under MIL-F-14256, was QPL approved as Type RMA. Although the fluxing ability approaches that of Type RA flux, residues after soldering are non-corrosive and non-conductive. 186 Flux-Pen has been developed for use in critical applications where difficult assemblies are to be soldered, but process requirements stipulate use of Type RMA flux. 186 Flux-Pen possess high thermal stability for soldering multi-layer assemblies which require higher temperatures. Exposure to high preheat temperatures does not degrade solubility of the residue in normal cleaning solvents. There is no surface insulation resistance degradation caused by the flux residue. The use of a minimum of ionic activating agents and the inactive nature of the residue permits leaving the residue on circuit board assemblies for many applications. The flux residue is also moisture and fungus resistant.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

FEATURES & BENEFITS

- High thermal stability
- Improves soldering performance
- Eliminates the need and expense of cleaning
- Classified as ROL1 per J-STD-004 & J-STD-004B

ROHS COMPLIANCE

This product meets the requirements of the Restriction of Hazardous Substances (RoHS)

Category	Results	Procedure/Remarks
Physical Properties		
Specific Gravity	0.879	Anton Paar DMA @ 25 °C
Flash Point	18 °C (64 °F)	
Percent Solids (Theoretical)	36%	IPC-TM-650, Method 2.3.34
Acid Number (Typical)	55 mg KOH/g flux	IPC-TM-650, Method 2.3.13
Reliability Properties		
Copper Mirror Corrosion	Low	IPC-TM-650, Method 2.3.32

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Category	Results	Procedure/Remarks
Corrosion Test	Low	IPC-TM-650, Method 2.6.15
Silver Chromate	Pass	IPC-TM-650, Method 2.3.33
Chloride and Bromides	0.02%	IPC-TM-650, Method 2.3.35
Electrochemical Migration (ECM)	Pass	IPC-TM-650 Method 2.6.14.1 [65 °C, 85% RH, 100V, 21days]
Surface Insulation Resistivity (SIR)	Pass	IPC-TM-650, Method 2.6.3.7
Surface Insulation Resistivity (SIR)	Pass	IPC-TM-650, Method 2.6.3.3

FLUX APPLICATION

186 Flux-Pen is applied to circuit boards via Flux-Pen for rework of printed wire assemblies.

PROCESSING GUIDELINES

Process Considerations

186 Flux-Pen should only be applied to areas that will be fully heated by the soldering iron or other reflow tool. Care should be taken to avoid flooding the assembly. The surface tension has been adjusted to help the flux form a thin film on the board surface allowing rapid solvent evaporation.

Cleaning

186 Flux-Pen flux residues are non-conductive, non-corrosive, and do not require removal in most applications.

Storage, Handling and Shelf Life

186 Flux-Pen is flammable. Store away from sources of ignition. Shelf life is 2 years from date of manufacture when handled properly and held at 10 to 25 °C (50 to 77 °F). The cap must be in place when not being used.

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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

North America 140 Centennial Avenue Piscataway, NJ 08854 1.800.367.5460	**Europe** Unit 2, Genesis Business Park Albert Drive Woking, Surrey, GU21 5RW, UK 44.01483.758400	**Asia** 8/F., Two Sky Parc 51 Hung To Road Kwun Tong, Kowloon, Hong Kong, SAR China 852.2500.5365

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

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