ALPHA® OM-338 Flux

No-Clean Rework and BGA Flux

DESCRIPTION

This No-Clean flux is engineered to be used in the placement and reflow of lead-free solders for BGA attach processes. Before reflow, the flux provides sufficient tack to hold the BGA in place. After reflow the residue is clear, colorless. This paste flux can also be used in the rework of components.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

APPLICATION GUIDELINES

The flux may be applied by screen printing or pin transfer (substrate) or doctor blade / dip coating (package). It can also be dispensed.

Cleaning

Although designed as a no-clean flux system, the reflowed residue may be cleaned with BIOACT® SC-10E, BIOACT® SC-30, ALPHA SM-110, ALPHA SM-110E, ALPHA BC-2200, Kyzen Micronox® MX2501, and Zestron® ATRON® AC205. Production stencils or pin transfer equipment can be cleaned with BIOACT® SC-10.

TECHNICAL DATA

Item	Typical Values
Appearance	Smooth, white to off-white paste
Viscosity (Spiral/Malcom)	Typically, 170 to 300 Poise @ 25 °C (5 RPM)
Tack strength (per IPC J-STD-004) Initial 6 hr @ 50% RH 24 hr @ 50% RH	 6.5 grams / sq mm 6.2 grams / sq mm 6.2 grams / sq mm
Fineness of Grind	<10 µm
Acid Number (mg KOH/g)	140 to 170
Corrosivity	Passes IPC Cu mirror, Cu corrosion
Halide Content	Halide free (ROL0 per IPC J-STD-004)
Moisture Content	< 1.0 % (w/w)
J-STD-004 SIR (pass > 10^8) J-STD-004 SIR (pass > 10^8) J-STD-004 SIR (pass > 10^8 BELLCORE SIR (pass > 10^{11}) BELLCORE SIR (pass > 10^{11})	4.2 x 10^9 Ohms, 1 Day, un-cleaned 6.8 x 10^9 Ohms, 4 Days, un-cleaned 8.9 x 10^9 Ohms, 7 Days, un-cleaned 7.3 x 10^{11} Ohms, 1 Day, un-cleaned 3.5 x 10^{11} Ohms, 4 days, un-cleaned
Electromigration (500 hours) (BELLCORE)	1.6 x 10^{11} Ohms, 96 hours 4.0 x 10^{11} Ohms, 500 hours (pass: final > init /10)

PROCESSING GUIDELINES

Reflow

Reflow can be accomplished in dry air or nitrogen controlled atmosphere. The initial ramp rate should be 1 to 2 °C per second. If necessary, a dwell of 1 to 2 minutes at 130 to 160 °C is acceptable. Following this equilibrating period is a ramp of 60 to 120°C to a peak temperature of 235 to 260 °C depending upon alloy. The time above alloy liquidus (TAL) should be 45 to 90 seconds. Cooling rate should be 3 to 7 °C per second to room temperature.

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 at AlphaAssembly.com**

STORAGE

The flux should be stored in sealed containers and can be stored at room temperature up to 25 °C (77 °F) for up to 12 months. If the material has been refrigerated (stored @ 0 to 10 °C or 32 to 50 °F) then the container should be allowed to reach room temperature before opening in order to prevent moisture condensation from ambient air on the flux.

CONTACT INFORMATION

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

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