

# ALPHA<sup>®</sup> OM-338 PASTE FLUX

## No-Clean Rework and BGA Flux

### DESCRIPTION

**ALPHA OM-338**, a no-clean paste flux, 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

### PRODUCT INFORMATION

Packaging Size: 100 gm jar, 10 cc and 30 cc syringes  
Lead-Free: Complies with RoHS Directive EU/2015/863;  
amending Annex II to 2011/65/EU

### APPLICATION GUIDELINES

The paste 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 ALPHA SM-110, ALPHA SM-110E, ALPHA BC-2200, Kyzen Micronox<sup>®</sup> MX2501, and Zestron<sup>®</sup> ATRON<sup>®</sup> AC205. Production stencils or pin transfer equipment can be cleaned with ALPHA SM-110.

**TECHNICAL DATA**

Item	Typical Values
Appearance	Smooth, off-white to pale yellow paste
Viscosity (Spiral/Malcom)	Typically, 170 to 300 Poise @ 25 °C (5 RPM)
<u>Tack strength (per IPC J-STD-004)</u>	
Initial	6.5 grams / sq mm
6 hr @ 50% RH	6.2 grams / sq mm
24 hr @ 50% RH	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 <sup>8</sup> )	4.2 x 10 <sup>9</sup> Ohms, 1 Day, un-cleaned
J-STD-004 SIR (pass > 10 <sup>8</sup> )	6.8 x 10 <sup>9</sup> Ohms, 4 Days, un-cleaned
J-STD-004 SIR (pass > 10 <sup>8</sup> )	8.9 x 10 <sup>9</sup> Ohms, 7 Days, un-cleaned
BELLCORE SIR (pass > 10 <sup>11</sup> )	7.3 x 10 <sup>11</sup> Ohms, 1 Day, un-cleaned
BELLCORE SIR (pass > 10 <sup>11</sup> )	3.5 x 10 <sup>11</sup> Ohms, 4 days, un-cleaned
Electromigration (500 hours) (BELLCORE)	1.6 x 10 <sup>11</sup> Ohms, 96 hours 4.0 x 10 <sup>11</sup> Ohms, 500 hours (pass: final > init /10)

**REFLOW PROFILES**

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.

**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.**

**STORAGE**

The paste flux should be stored in sealed containers and need not be refrigerated. The shelf life of unopened containers at room temperature (19 to 25 °C / 66 to 77 °F) is up to 12 months from the manufacturing date. If the material has been exposed to lower temperatures, the containers should be allowed to reach room temperature before opening to prevent moisture condensation from ambient air onto the flux.

**CONTACT INFORMATION**

[www.macdermidalpha.com](http://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

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