

# ALPHA<sup>®</sup> CVP-520 Paste Flux

Lead-Free Capable, Zero-Halogen, ROL0, No-Clean Paste Flux

## DESCRIPTION

This No-Clean flux is designed to enable low temperature surface mount assembly technology. The flux residue from **ALPHA CVP-520** is clear, colorless and provides excellent electrical resistivity, exceeding industry standards. This paste flux can also be used in the rework of components. **ALPHA CVP-520** paste flux is available in 30cc & 10cc syringes.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

## APPLICATION GUIDELINES

### Cleaning

Although designed as a no-clean flux system, the reflowed residue may be cleaned with ALPHA BC-2200 aqueous cleaner. For solvent cleaning, agitation for 5 minutes in the following cleaners is recommended: ALPHA SM-110E, BIOACT SC-10E and Kyzen Micronox MX2501.

Production stencils or pin transfer equipment can be cleaned with ALPHA SM-110E, ALPHA SM-440, ALPHA BC-2200 and BIOACT SC-10E.

## TECHNICAL DATA

Category	Results
Appearance	Smooth & Creamy
Viscosity (Spiral/Malcom, JIS)	Typically, 300 to 525 Poise @ 25 °C (10 RPM)
Fineness of Grind	<10 µm
Acid Number (mg KOH/g)	100 to 115
Corrosivity	Passes IPC Cu mirror, Cu corrosion
Halide Content	Halide free (ROL0 per IPC J-STD-004)
Moisture Content	0.4 % max (w/w)
IPC SIR (pass > 10 <sup>8</sup> )	3.6 x 10 <sup>11</sup> Ohms, 7 Day, un-cleaned
BELLCORE SIR (pass > 10 <sup>11</sup> )	1.1 x 10 <sup>11</sup> Ohms, 4 days, un-cleaned
Electromigration (500 hours)	8.4 x 10 <sup>11</sup> Ohms, Initial
(BELLCORE)	1.4 x 10 <sup>12</sup> Ohms, 500 hours (pass: final > init /10)

Category	Results
Electromigration (1000 hours)	1.0 x 10 <sup>10</sup> Ohms (PASS: > 1.0 x 10 <sup>8</sup> ohm)
(JIS)	

Tack Test (IPC) @ 50%RH (Rhesca TAC-2)	
Time (hr.)	Tack Force (gram/mm <sup>2</sup> )
0	11.71
6	10.57
24	7.18

- Tack strength is determined per IPC J-STD-004

## REFLOW PROFILES

Reflow can be accomplished in dry air or nitrogen controlled atmosphere. A straight ramp profile with a rate of 1 to 2 °C per second up to a peak temperature of 155 to 180 °C as necessary can be used. If needed, a dwell of 1 to 2 minutes at 100 to 125 °C is acceptable if the application requires it. Following this equilibrating period is a ramp to a peak temperature of 155 to 180 °C. The time above alloy liquidus (TAL) should be 30 to 90 seconds. Cooling rate should be 3 to 8 °C per second to room temperature.

Note: These are profiles that were tested in the lab with acceptable reflow and coalescence performance. Optimization to each board application should still be carried out by users to ensure best results.

## 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 or [link here](#).



**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 [MacdermidAlpha.com/assembly-solutions/knowledge-base](http://MacdermidAlpha.com/assembly-solutions/knowledge-base).**

**STORAGE**

The flux should be stored in sealed containers and need not be refrigerated. Shelf life of unopened containers is 6 months. If the material has been chilled, the container should be allowed to reach room temperature before opening in order to prevent moisture condensation from ambient air onto the flux.

**CONTACT INFORMATION**

**To confirm this document is the most recent version, please contact [Assembly@MacDermidAlpha.com](mailto:Assembly@MacDermidAlpha.com)**

[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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