

ALPHA[®] WS-693 CPS PASTE FLUX

Water-Soluble, Halide-Free Paste Flux

DESCRIPTION

ALPHA WS-693 CPS is a water-soluble, halogen-free paste flux designed for use with BGAs.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

FEATURES AND BENEFITS

- Excellent wetting – reduces the occurrence of dark balls.
- Excellent cleanability – residues are rinsed off with water easily.
- Long Tack Life.

PRODUCT INFORMATION

Packaging Sizes: 100 gram jar

APPLICATION GUIDELINES

Usage:

- Metal mask or mesh screen printing
- Various types of transcription methods
(Ball transcription; doctor blade method; pin transcription)
- Dispense method
- And more

The application environment (such as printer, dispenser) should be 23 to 25 °C and 40 to 60% relative humidity.

HALOGEN STATUS

Halogen Standards			
Standard	Requirement	Test Method	Status
JEITA ET-7304 Definition of Halogen Free Soldering Materials	< 1000 ppm Br, Cl, F in solder material solids	TM EN 14582	Pass
IEC 612249-2-21	Post Soldering Residues contain < 900 ppm each or total of < 1500 ppm Br or Cl from flame retardant source		Pass
JEDEC A Guideline for Defining "Low Halogen" Electronics	Post soldering residues contain < 1000 ppm Br or Cl from flame retardant source		Pass

TECHNICAL DATA

Category	Results
Chemical Properties	
Appearance	Brown
Stencil Life	≥ 8 hrs. (@ 20 to 25 °C, 40 to 60% RH)
pH Value	5 to 7
Spread	88 %
Viscosity	350±100P (@ 25 °C, 10RPM)

REFLOW PROFILES

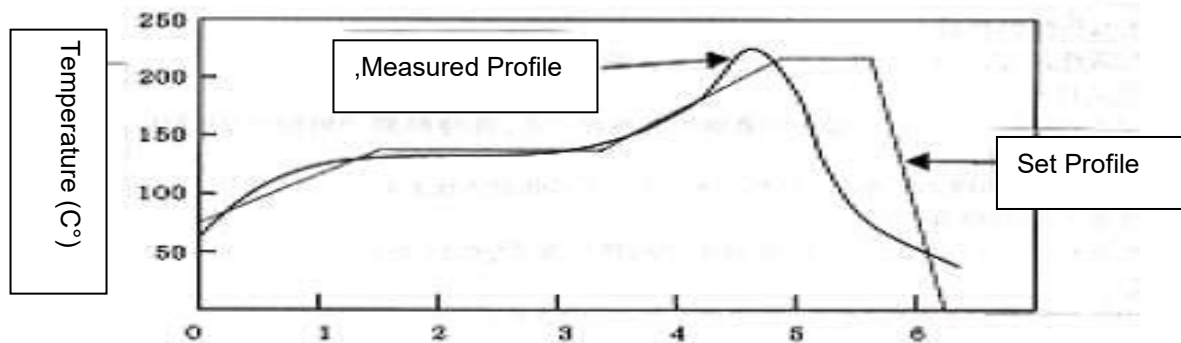
ALPHA WS-693 CPS Paste Flux is Applicable to various types of reflow methods such as infrared rays, hot air and VPS, regardless of the existence of nitrogen.

Typical reflow condition are as follows:

Alloy composition of BGA ball 63Sn/37Pb or 62Sn/36Pb/2Ag

Temperature Profile

- Preheat 1 60 to 80 °C /min.
- Preheat 2 145 °C, 1 to 2 min.



- Preheat – Reflow 30 to 60 °C /min.
- Reflow 215 to 220 °C, 45 to 60sec.
- Cooling > 100 °C /min.

Flux residues should be cleaned with water below 50 °C. After rinsing with water thoroughly, ionic residues on circuit boards can be controlled at the value under 2.0µg NaCl / sq.in.

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.**

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

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

www.macdermidalpha.com

<p>North America 109 Corporate Blvd. South Plainfield, NJ 07080, USA 1.800.367.5460</p>	<p>Europe Unit 2, Genesis Business Park Albert Drive Woking, Surrey, GU21 5RW, UK 44.01483.758400</p>	<p>Asia 8/F., Paul Y. Centre 51 Hung To Road Kwun Tong, Kowloon, Hong Kong 852.3190.3100</p>
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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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