



ARBITAL Solutions

Product Data Sheet

BGA Paste Flux AR- 339

DESCRIPTION

AR- 339 BGA Paste Flux is NO-CLEAN and LEAD-FREE FLUX.

This Flux is developed to be used in the placement of lead-free solders balls in BGA attach processes, before reflow. And re-work of BGS and other fine pitch SMT components.

BENEFITS

- The flux provides sufficient tack to hold the BGA in place.
- After reflow the residue is clear, colourless.
- Easy to perform the Re-work for BGS and other fine pitch SMT components.
- It is meeting No Clean and Pb free and other regulatory requirements.
- Halide free ROL0.
- Effective below 280°C.
- Can be use both Pb and Pb free alloy.

APPLICATIONS

The flux may be applied by Brush, screen printing, pin transfer or doctor blade / dip coating methods.

Reflow:

Reflow can be accomplished in dry air or nitrogen-controlled atmosphere.

The initial ramp rate should be 1 - 3°C per second.

Dwell of 1.5 to 3 minutes at 60 - 180°C.

Peak temperature of 235 - 260°C depending upon alloy.

TAL (time over alloy liquidus) should be 45 - 90 seconds.

Cooling rate should be 3 - 7°C per second to room temperature.

Cleaning:

Although the Flux designed as a no clean flux, the reflowed residue may be cleaned with EF-G10 H Cleaner.

Production stencils or pin transfer equipment can be cleaned with EF-G10 H Cleaner or AS-7 Aqua-clean.



PHYSICAL, CHEMICAL and ELECTRICAL PROPERTIES

Appearance Smooth, white to off-white paste
Viscosity (Spiral/Malcom) Typically 170 – 300 Poise @ 25°C (5 RPM)
Tack strength (As per IPC J-STD-004)
Initial 6.5 grams / sq mm
24 hr @ 50% RH 6.2 grams / sq mm
Fineness of Grind <10 µm
Acid Number (mg KOH/g) 130 – 168
Corrosivity Passes IPC Cu mirror, Cu corrosion
Halide Content Halide free (ROL-0 per IPC J-STD-004)
J-STD-004 SIR (pass > 108) 8.9 x 10⁹ Ohms, 7 Days, un-cleaned
BELLCORE SIR (pass > 1011) 3.5 x 10¹¹ Ohms, 4 days, un-cleaned
Electromigration (500 hours) 1.6 x 10¹¹ Ohms, 96 hours

PACKAGING

Available in plastic jars of 500 Gm and 100 Gm.

STORE, HEALTH AND SAFETY

STORAGE

The flux should be stored in sealed containers and need not be refrigerated. Shelf life of unopened containers is nominally 1 months. If the material has been chilled, the container should be allowed to reach room temperature before opening, to prevent moisture condensation from ambient air onto the flux.

SAFETY

AR-339 flux is not considered toxic, its use in typical reflow processes will generate some decomposition and reaction vapours. These vapours should be adequately exhausted from the work environment and away from personnel. Refer the MSDS for additional safety information.

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