



Solder plus Support

Epoxy 4044

Surface Mount Epoxy for Stencil Printing

Features:

- For Printing Applications
- Fast Curing
- Robust Handling Characteristics
- One Part Epoxy
- High Shear Strength
- Compatible High Speed Placement Equipment

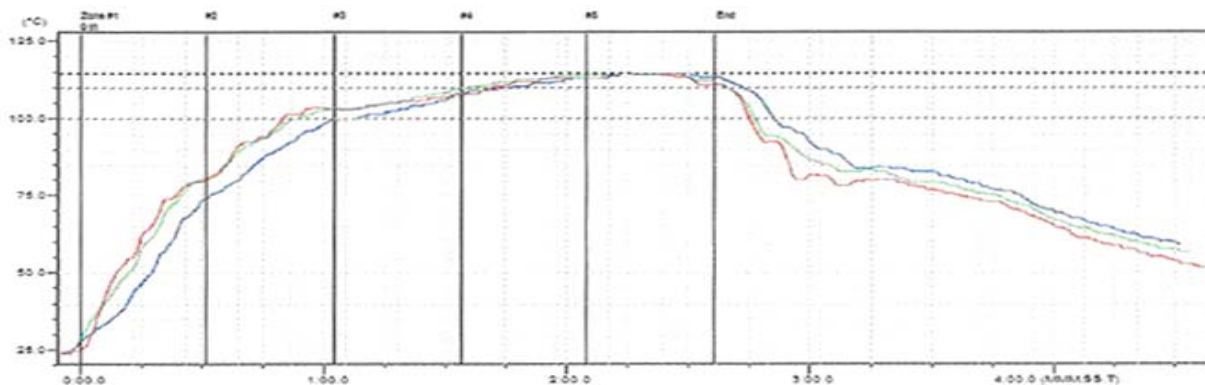
Description:

Epoxy 4044 is single part epoxy adhesive used for bonding SMT components to a PWB prior to double sided reflow or wave solder assembly. Epoxy 4044 has a formulated tolerance to shear-thinning and quick cure properties when exposed to heat. Viscosity and surface tension of Epoxy 4044 provide the tack force needed for use with high speed placement equipment.

Application:

- Epoxy 4044 is delivered ready to use, and is available in syringes, cartridges, and jars.
- When stencil printing, use a clean stencil and apply epoxy to stencil in 1/2" diameter bead.
- Bond strength will vary depending on component type, adhesive dot size, cure and type of solder mask.

Reflow Profile:



Time from Ambient to 75°C	Time from 75°C to 100°C	Time from 100°C to Peak: 120°C ± 5°C	Maximum Time at 120°C ± 5°C	Maximum Time Ambient to Peak
30 seconds ± 10	30 seconds ± 10	60 seconds ± 10	60 seconds	< 3 minutes

Cleaning:

Uncured adhesive may be removed from the PCB with isopropyl alcohol. Cured epoxy or removal of components bonded with Epoxy 4044 can be accomplished with the application of heat. A temperature of approximately 120°C will soften the material for easier removal.

Handling and Storage:

- This material has an unrefrigerated shelf life of 6 months.
- If the material should harden or crystallize 4044 can be reheated to 40C for 8 hours to be returned to a useable condition.
- Clean dispensing nozzles thoroughly after each use. Avoid leaving adhesive in nozzles for extended periods of time as it will harden.
- Keep container sealed when not in use. Care should be taken not to allow product contamination or air entrapment when transferring to, or storing in, other containers.
- Do not mix new and used adhesive in the same container.

Safety:

- Use with adequate ventilation and proper personal protective equipment.
- Refer to the accompanying Material Safety Data Sheet for any specific emergency information.
- Do not dispose of any hazardous materials in non-approved containers.

Physical Properties:

Parameter	Value
Visual	Thick Liquid
Odor	Aromatic (slightly)
Color	Red
Viscosity	300-500 kcps (relative to production batch)
Specific Gravity	1.13 (water = 1)
Flash Point	N/A
Boiling Point	>260°C

Mechanical Specifications (@25°C):

Parameter	Value
Heat Deflection Temp	97°C
Tensile Strength	11,500 psi
Elongation %	4.6
Tensile Modulus	4.9 psi x 10 ⁵

Corrosion Testing:

Parameter	Requirements	Results
Copper Mirror Test	Bellcore GR78 Core	Passed
Chloride Ion Test	Bellcore GR78 Core	Passed
Silver Chromate	Bellcore GR78 Core	Passed

Surface Insulation Resistance:

Test	Conditions	Specifications	Results
SIR 35/85, 4 Days	Pattern Up	8.9E09 Ohms Min.	1.4E10 Ohms Passed
SIR 35/85, 4 Days	Pattern Down	8.9E09 Ohms Min.	1.2E11 Ohms Passed

Electromigration:

Test	Conditions	Specifications	Results
85/85, 21 days	Taiyo PSR 4000 Mask	Rf/Ri > 0.1	1.19E10/ 3.9E10 3.28 Passed
85/85, 21 days	Ciba Geigy Probimer 52 Mask	Rf/Ri > 0.1	9.05E9/ 3.33E9 0.37 Passed

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 AIM IS ISO9001:2008 & ISO14001:2004 CERTIFIED

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