

Three Bond 2274

(One-comp. Epoxy Resin / Repairable Underfiller)

The product Three Bond 2274 is a one-component epoxy resin which has been specially developed for surface mounting, in order to keep the components in position on the printed circuit boards during the placement and the soldering process. This SMD adhesive (Surface Mount Adhesive) excels in fast application methods and reduced curing times and ensures a perfect safety of the process. Due to its low glass transition temperature (T_g), component parts having been potted beforehand, can be easily repaired or removed.

1. Features

- The simple application by means of automatic dispensers and screen printers allows a faster placement.
- The fast curing of the resin at low temperatures enables shorter processing times.
- As the resin contains more than 99 % of nonvolatile matters, there is only a minimal shrinkage and outgassing while curing.
- The cured resin excels in excellent electric properties as well as in good chemical and thermal resistance.
- Perfectly suited as repairable Underfiller for Quad Flat Package (QFP), Ball Grid Array Packages (BGA) and Chip Size Package (CSP)

2. Typical properties

Test Item	Result	Unit
Colour	Black	
Viscosity at 25°C	12	Pa·s
Density at 25°C	1.14	g/cm ³
Curing time at 60°C	180	min
70°C	50	min
80°C	20	min
100°C	10	min
120°C	5	min
Shore-hardness	86 D	
Shear strength Fe/Fe	11	MPa
Glass transition temperature (DSC)	65	°C
Coefficient of thermal expansion	93×10^{-6}	°C ⁻¹
Shelf life at 5°C	6	months

3. Handling

- Keep the epoxy resin tightly closed in the original container and store it in a dark, dry, sufficiently ventilated and cool place.
- Before opening the container let the product reach room temperature as otherwise the formation of dew would be resulting.
- In order to obtain optimal results remove humidity, fat and other impurities from the fitting surface.
- According to the nature of the joints (width, surface roughness, unevennesses) apply an appropriate quantity of epoxy resin uniformly on one of the fitting surfaces and join the parts immediately, position them correctly and fix them.
- The degree of curing varies depending on the thickness of the coating, the ambient temperature and the duration of the process.

- When a precision resin is used, changes in viscosity versus the ambient temperature are to be verified.
- Resin once transferred into another container should not be returned to the original container. Excess sealant can be easily wiped off with a cloth.

4. Packing

1 kg cans

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