Three Bond 2271G

(One-component Epoxy Resins / NCP)

The product Three Bond 2271G is an one-component epoxy resin, which has been specially developed to provide Non Conductive Paste for Flip Chip bonding process.

1. Features

- Fast cure (for example 190°C x 5 sec)
- Low viscosity for easy dispensing (15 Pa·s)
- Low coefficient of thermal expansion

2. Typical properties

Test Item	Result	Unit
Colour	Light yellow	
Viscosity at 25°C	15	Pa·s
Density at 25°C	1.25	g/cm³
Curing time at 190°C	5	sec
DSC Analysis		
Reactive beginning temperature	70	°C
Reactive peak temperature	115	°C
Reactive end temperature	170	°C
Peak area	240	J/g
TMA Analysis		
Glass transition temperature	103	°C
Coefficient of thermal expansion: α_1	52×10^{-6}	$°C^{-1}$
Coefficient of thermal expansion: α_2	155×10^{-6}	$°C^{-1}$
DMA Analysis		
Glass transition temperature	100	°C
Young's modulus	4.3	GPa
Shear strength G-EP/G-EP	24	MPa
Volume resistivity	2×10^{14}	Ω·m
Dielectric constant at 1 kHz	3.4	
Dielectric constant at 1 MHz	3.4	
Dielectric dissipation factor at 1 kHz	0.004	
Dielectric dissipation factor at 1 MHz	0.004	
Shelf life at 5°C	6	months

3. Handling

- Keep the epoxy resins tightly closed in the original container and store them in a dark, dry, sufficiently ventilated and cool place.
- Before opening the container let the products 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 surfaces.
- According to the nature of the joints (width, surface roughness, unevennesses) apply an appropriate quantity of epoxy resins 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 using precision resins, changes in viscosity versus the ambient tmemperature are to be verified.
- Products 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

5 x 10 cc Syringes (4g)