

## Technical Data Sheet

### FeedBond® FP-5100FA

#### *Electrically Conductive Die Attach Adhesive*

##### **Description:**

**FeedBond®FP-5100FA** single component, electrically conductive die attach adhesive is designed for high reliability packaging application. This adhesive can be used for small die sized chip LED, IC etc. It has the excellent rheological properties for high speed dispensing and minimal resin bleed and low volatile performances are considered as the strength for this material.

##### **Application Package:**

Chip LED, SMD LED, Photo coupler, IrDA etc

##### **Characteristics:**

- A smooth, flowing and no string problem.
- Test for Au, Ag, Cu & PCB substrate, no bleeding problem.
- Middle, low viscosity, apply for use in automatic die attach equipment.
- At high temperature, still maintain fine adhesion and high heat conduction.

UNCURED PROPERTIES		TEST DESCRIPTION	TEST METHOD
Density	3.3 g/cc	Pycnometer	FT-P001
Appearance	Silver		
Viscosity @ 25°C	8200 cps	Brookfield DV-III/CP-51 @ 5rpm	FT-P006
Thixotropic Index		Brookfield DV-III/CP-51	
@ 25°C	5.2	Visc. @ 0.5rpm/Visc. @ 5rpm	FT-P008
Grind	<25µm	Grind meter	FT-P026
Work Life @ 25°C	48hrs	25% increase in visc. @ 5rpm	FT-P024
Shelf Life @ -40°C	12months		FT-P018
CURE CONDITION		TEST DESCRIPTION	TEST METHOD
Standard Cure Condition		60 minutes in oven @150°C or 30 minutes in oven @175°C	

## FeedBond® FP-5100FA

PHYSIOCHEMICAL PROPERTIES	TEST DESCRIPTION	TEST METHOD
Glass Transition Temperature (Tg) 104°C	DMA 3 Point Bending Mode	FT-M014
Coefficient of Thermal Expansion		
Below Tg( $\alpha_1$ ) 48 ppm/°C	TMA Expansion Mode	FT-M016
Above Tg( $\alpha_2$ ) 200 ppm/°C		
Dynamic Tensile Modulus		
@ -60°C 6536MPa	Dynamic Mechanical Thermal	
@25°C 6305MPa	Analysis using <1.6 mm thick	FT-M019
@150°C 168MPa	Specimen(TA)	
@250°C 114MPa		
Weight loss <0.2% @200°C	TGA	FT-P010
<1.0% @300°C		
Volume resistivity <0.0005 $\Omega \cdot \text{cm}$	4-point probe	FT-P017
Thermal conductivity 3.1W/mK	Hot Disk	FT-P022
MECHANICAL PROPERTIES- POST CURE	TEST DESCRIPTION	TEST METHOD
Die Shear Strength @ 25°C > 3kg/die	45mil $\times$ 45mil die on Ag Leadframe	FT-M012
Hardness 85 $\pm$ 5	Shore D	FT-P037

### Instruction

#### Thawing

Place the container to stand vertically for 30min ~90min.**DO NOT** open the container before adhesive reaches ambient temperature to prevent the moisture condensation. Any moisture that collects on the thawed container should be removed prior to use. Adhesives that appear to have separated should not be used.

#### Storage

Adhesive should be stored @ -40°C. The shelf life of the material is only valid when the material has been stored at the correct storage condition.

#### Availability

FeedBond® adhesives are packaged in syringes or pots per customer specification. For the details, please contact our Customer Service or sales department.