Technical Data Sheet

FeedBond® FP-5100-E10

Electrically Conductive Die Attach Adhesive

Description:

FeedBond®FP-5100-E10 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:

- 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**
Appearance	Silver		
Viscosity @ 25°C	11,500±2,000 cps	Brookfield DV-III/CP-51 @ 5rpm	FT-P006
Thixotropic Index @ 25°C	5.5	Brookfield DV-III/CP-51 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 @160°C	

p.s. The tables shown above are typical values only. If you need to write a specification, please request our current Standard Release Specification

FeedBond® FP-5100-E10

PHYSIOCHEMICAL PROPERTIES		TEST DESCRIPTION	TEST METHOD
Glass Transition Temperature (Tg)	114℃	DMA 3 Point Bending Mode	FT-M014
Coefficient of Thermal Expansion			
Below Tg(α1)	47 ppm/°C	TMA Expansion Mode	FT-M016
Above Tg(α2)	135ppm/°C		
Dynamic Tensile Modulus		Dynamic Mechanical Thermal Analysis using <1.6 mm thick Specimen (TA)	FT-M019A
@25℃	5542MPa		
@150℃	195MPa		
@250℃	178MPa		
Weight loss	<0.2% @200°C <1.0% @300°C	TGA	FT-P010
Volume resistivity	<0.0005 Ω · cm	4-point probe	FT-P017
Thermal conductivity	3.0W/mK	Hot Disk	FT-P022
MECHANICAL PROPERTIES-POST CURE		**TEST DESCRIPTION**	**TEST METHOD**
Die Shear Strength @ 25℃	> 150g/die	11mil × 11mil die on Ag Leadframe	FT-M012

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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 @ -20℃ or -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.

Storage Temp.	-42°C~-35°C	-22°C~ -18°C	0°C~ 5°C	18°C~ 28°C
Shelf Life	12 months	6 months	3 months	2 days