

Technical Data Sheet

FeedBond® FP-7003

Electrically Conductive Die Attach Adhesive

Introduction:

FP-7003 is a silver-filled epoxy type conductive die-attach adhesive, apply in high throughput and automatic die attach equipment. The product is special for semiconductor package.

Characteristics:

- Excellent dispensability with minimal tailing and stringing
- Minimal bleeding and minimal volatiles
- Good bonding on silver-plated leadframe

UNCURED PROPERTIES		TEST DESCRIPTION	TEST METHOD
Density	3.5 g/cc	Pycnometer	FT-P001
Appearance	Silver		
Viscosity @ 25°C	8000 cps	Brookfield DV-III/CP-51 @ 5rpm	FT-P006
Thixotropic Index @ 25°C	5.4	Brookfield DV-III/CP-51 Visc @ 0.5rpm/Visc @ 5rpm	FT-P008
Grind	< 20µm	Grind meter	FT-P026
Water Content	< 0.5%	Moisture Titrator	FT-P002
Work Life @ 25°C	2 day	25% increase in visc. @ 5rpm	FT-P024
Shelf Life@ -40°C	12 months		FT-P018
CURE CONDITION		TEST DESCRIPTION	TEST METHOD
Standard Cure Condition		60 minutes in oven @175°C	
Weight loss on cure	< 5%		FT-P010
MECHANICAL PROPERTIES- POST CURE		TEST DESCRIPTION	TEST METHOD
Die Shear Strength @ 25°C	> 7 kg/die	2mmx2mm Si die on Ag/Cu LF	FT-M012

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

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PHYSIOCHEMICAL PROPERTIES		TEST DESCRIPTION	TEST METHOD
Glass Transition Temperature (Tg) 93°C		DMA 3 Point Bending Mode	FT-M014
Coefficient of Thermal Expansion		TMA Expansion Mode	FT-M016
Below Tg(α 1)	41 ppm/°C		
Above Tg(α 2)	172 ppm/°C		
Flexural Modulus		Dynamic Mechanical Thermal Analysis(TA) using <1.6mm thick specimen	FT-M019A
@-60°C	5821MPa		
@25°C	4861MPa		
@150°C	109MPa		
@250°C	103MPa		
Weight loss	<1 % @300°C	Thermogravimetric Analysis	FT-P010
Volume resistivity	0.0001 $\Omega \cdot \text{cm}$	4-point probe	FT-P017
Thermal conductivity	2.5 W/mK	Hot Disk	FT-P022

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.