

Technical Data Sheet

FeedBond® FP-5046

Electrically Conductive Die Attach Adhesive

Introduction:

FP-5046 electrically conductive adhesive is designed for die attach of IC package with small to medium size dies on silver and gold-plated leadframes, as well as on copper leadframes.

Characteristics:

- Minimal tailing and stringing
- Minimal bleeding
- Good bonding on variable substrates.

UNCURED PROPERTIES		TEST DESCRIPTION	TEST METHOD
Density	3.5 g/cc	Pycnometer	FT-P001
Appearance	Silver		
Viscosity @ 25°C	8200±1500cps	Brookfield DV-III/CP-51 @ 5rpm	FT-P006
Thixotropic Index @ 25°C	4.5~6.5	Brookfield DV-III/CP-51 Visc. @ 0.5rpm/Visc @ 5rpm	FT-P008
Work Life @ 25°C	48 hours	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 @150°C	
Alternate Cure Condition		30 minutes in oven @175°C	
Weight loss on cure	3.6%		FT-P010
MECHANICAL PROPERTIES- POST CURE		TEST DESCRIPTION	TEST METHOD
Die Shear Strength @ 25°C	14.0 kg/die	2mm×2mm Si die on Ag/Cu LF (80mil×80 mil)	FT-M012
Die Shear Strength @ 260°C	2.0 kg/die	2mm×2mm Si die on Ag/Cu LF (80mil×80 mil)	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- POST CURE	TEST DESCRIPTION	TEST METHOD
Glass Transition Temperature 96°C	DMA(TA) 3 Point Bending Mode	FT-M014A
Coefficient of Thermal Expansion	TMA Expansion Mode	FT-M016
Below Tg 36 ppm/°C		
Above Tg 174 ppm/°C		
Dynamic Tensile Modulus	Dynamic Mechanical Thermal(TA)	FT-M019A
@ -60°C 7134 MPa	Analysis using <1.6 mm thick specimen	
@25°C 6701 MPa		
@150°C 55 MPa		
@250°C 52 MPa		
Ionic Content		
Cl- <20 ppm	Teflon flask, 20~40 mesh, 5g sample in 50g DI water, 24hr@100°C	FTC-021
Na+ <10 ppm		
K+ <10 ppm		
THERMAL ELECTRICAL PROPERTIES- POST CURE	TEST DESCRIPTION	TEST METHOD
Thermal Conductivity 3.0 W/m · K	HOT DISK Tester	FT-P022
@ 25°C		
Volume resistivity 0.0001ohm-cm	4-Point Probe	FT-P017

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 . 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.