# Technical Data Sheet

# FeedBond® EP-2015-3-Black

## Non-Conductive Adhesive

### **Introduction:**

*EP-2015-3-Black* is an epoxy type adhesive designed for die-attach applications, it can be applied for BGA / lead frame package. It can be cured with minimum bleeding, and shows good adhesion on different substrates.

#### **Characteristics:**

- Excellent dispensability with minimal tailing and stringing
- Minimal bleeding and minimal volatiles

UNCURE	D PROPERTIES	TEST DESCRIPTION	TEST METHOD
Appearance	black		
Viscosity @ 25°C	16500 cps	Brookfield DV-Ⅲ/CP-51 @ 5rpm	FT-P006
Thixotropic Index	3.6	Brookfield DV-Ⅲ/CP-51	FT-P008
@ 25°C		Visc. @ 0.5rpm/Visc @ 5rpm	
Grind	$< 15 \mu m$	Grind meter	FT-P026
Work Life @ 25°C	48 hours	25% increase in visc. @ 5rpm	FT D004
Shelf Life@ -30°C	6 month		FT-P024 FT-P018
to -20°C			F1-P018
CURE CONDITION		TEST DESCRIPTION	TEST
CORE	COMMITTON	TEST DESCRIPTION	METHOD
Standard Cure Cond	lition	60 minutes @150°C	

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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### **Insulative Die Attach Adhesive**

PHYSIOCHEMICAL PROPER	TIES-	TEST DESCRIPTION	TEST
POST CURE			METHOD
Glass Transition Temperature	125 ℃	DMA 3 Point Bending Mode	FT-M014
Coefficient of Thermal Expansi	on		
Below Tg	50 ppm/°C	TMA Expansion Mode	FT-M016
Above Tg	$150 \text{ ppm/}^{\circ}\text{C}$		
Dynamic Tensile Modulus			
@ -60°C	4500 MPa	Dynamic Mechanical Thermal	
@25°C	3000 MPa	Analysis using <1.6 mm thick specimen	FT-M019
@150°C	100 MPa		
@250°C	50 MPa		
MECHANICAL PROPERTII	ES-	TEST DESCRIPTION	TEST
POST CURE			METHOD
Die Shear Strength @ 25°C >	12kg/die	2mm×2mm Si die on Ag/Cu LF	FT-M012
		(80mil×80 mil)	

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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 @  $-20^{\circ}$ C to  $-30^{\circ}$ 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.