

TO : \_\_\_\_\_

TDS NO. :  
HTK-000000-00

Issue Date :  
0000-00-00

## Technical Data Sheet

Product Name     UNDERFILL

Your P/N :

Our P/N    :        UNIQUE 3075BHF

Receipt :



Manufacturer :  
Hi-Tech Korea Co., Ltd.

Address        191-7, Suwram-Ri, Seotan-Myeon, Pyeongtaek-Si, Gyeonggi-Do,  
Korea

Tel No.        +82-31-665-5093~4

Fax No.        +82-31-611-9783

Homepage     <http://www.hitechkorea92.com>

Email Address [hitechkorea92@unitel.co.kr](mailto:hitechkorea92@unitel.co.kr)



# HI-TECH KOREA CO., LTD.

# 191-7, SUWOLAM-RI, SEOTAN-MYEON, PYEONGTAEK-SI, KYEONGGI-DO, KOREA

TEL : +82-31-665-5093~4 // FAX : +82-31-611-9783

URL : <http://www.hitechkorea92.com> // Email : [hitechkorea92@unitel.co.kr](mailto:hitechkorea92@unitel.co.kr)

## 1. PRODUCT DESCRIPTION

UNIQUE 3075BHF is a fast flow, reworkable, single component epoxy glue that is designed to improve the attachment strength of CSP & BGA or Flip Chip devices during mechanical stress testing such as drop and bending testing.

## 2. KEY FEATURES

- \* Excellent Chemical Resistance and Water-Proofing
- \* Excellent Impact Resistance
- \* Rapid Curing
- \* Fast Flowing

## 3. MAIN INGREDIENT

- \* Epoxy Resin / Hardener / Filler / Pigment

## 4. TYPICAL PROPERTIES OF UNCURED MATERIAL

ITEM	CONDITION	SPECIFICATION	REMARKS
Appearance	Visual Inspection	Black Liquid	
Viscosity (cps)	Brookfield, 6rpm, @ 25°C	1,500 ~ 2,500	
Solid Content (wt%)	-	99 ~ 100	
Specific Gravity	@ 4°C	1.1 ~ 1.2	
Penetration Speed @ 25°C	18mm × 18mm × 150µm Gap	3 ~ 4 minutes	
Cure Condition	@ 150°C	≥ 7 minutes	
Work Life	@ 25°C	7 days	
Shelf Life	@ 5~10°C, ≤ 60%RH	6 months	

## 5. PHYSICAL PROPERTIES OF CURED MATERIAL

ITEM	CONDITION	SPECIFICATION	REMARKS
Corrosion	40°C, 95%RH, 96Hours	Not Occurred	
Moisture Absorption (wt%)	Water, 40°C, 24Hours	≤ 1.0	
Tensile Strength (N/mm <sup>2</sup> )	20~25°C, PCB(FR-4)	60 ~ 70	
Shrinkage (%)	-	2.0 ~ 3.0	
Insulation Resistance (Ω)	40°C, 95%RH, 96Hours	≥ 1 × 10 <sup>12</sup>	
Dielectric Constant (1MHz)	40°C, 95%RH, 72Hours	≤ 3.8	
Dissipation Factor (1MHz)	40°C, 95%RH, 72Hours	≤ 0.05	



# HI-TECH KOREA CO., LTD.

# 191-7, SUWOLAM-RI, SEOTAN-MYEON, PYEONGTAEK-SI, KYEONGGI-DO, KOREA

TEL : +82-31-665-5093~4 // FAX : +82-31-611-9783

URL : <http://www.hitechkorea92.com> // Email : [hitechkorea92@unitel.co.kr](mailto:hitechkorea92@unitel.co.kr)

Glass Transition Temperature (Tg)	DSC	26 ~ 30 °C	
Withstanding Voltage (kV)	40°C, 95%RH, 72Hours	1.8 ~ 2.2	
Hardness	Shore A	80 ~ 90	

## 6. PRODUCT INSPECTION

ITEM	TEST METHOD	CLASSIFICATION
Appearance	HT-1	Essential
Viscosity	HT-2	Essential
Specific Gravity	HT-4	Essential
Cure Condition	HT-5	Essential
Corrosion	HT-6	On Customer's Demand
Moisture Absorption	HT-7	On Customer's Demand
Tensile Strength	HT-8	On Customer's Demand
Insulation Resistance	HT-9	On Customer's Demand
Dielectric Constant	HT-10	On Customer's Demand
Dissipation Factor	HT-10	On Customer's Demand
Glass Transition Temperature	HT-11 (DSC or TMA)	On Customer's Demand
Coefficient of Thermal Expansion	TMA	On Customer's Demand
Thermal Resistance	HT-12	On Customer's Demand
Withstanding Voltage	HT-13	On Customer's Demand
Chemical Resistance	HT-14	On Customer's Demand
Hardness	HT-16	On Customer's Demand

## 7. ESSENTIAL MENTIONED ITEMS ON TEST REPORT

- 7-1 Appearance
- 7-2 Viscosity
- 7-3 Thixotropic Index
- 7-4 Specific Gravity
- 7-5 Solid Content
- 7-6 Cure Condition
- 7-7 Work Life
- 7-8 Shelf Life



# HI-TECH KOREA CO., LTD.

# 191-7, SUWOLAM-RI, SEOTAN-MYEON, PYEONGTAEK-SI, KYEONGGI-DO, KOREA

TEL : +82-31-665-5093~4 // FAX : +82-31-611-9783

URL : <http://www.hitechkorea92.com> // Email : [hitechkorea92@unitel.co.kr](mailto:hitechkorea92@unitel.co.kr)

## 8. SHELF LIFE AND STORAGE

8-1 Store in a refrigerator at 5~ 10°C.

8-2 Shelf life is 6 months in an unopened container since the date of manufacture.

## 9. HANDLING PRECAUTIONS

9-1 Do not mix with foreign substances.

9-2 Do not use where high temperature is occurred.

9-3 Store in an unopened container in a refrigerator at 5~10°C.

9-4 Must keep at room temperature for 2hours before using.

9-5 Protective gloves are recommended for hand protection.

9-6 Immediately wash skin with soap and water.

9-7 Workplace should be well-ventilated.

## 10. HOW TO READ THE LABEL



LOT NO. MARKING

01      11      12      -      0125

Month    Year      Day      Delivery Date

10-1 The Label is attached at side of container.

10-2 Lot No. is under our standard.

10-3 Lot No. is manufacturing date.

10-4 Delivery Date is the date when product is loaded from Hi-Tech Korea.

10-5 Shelf Life is 6 months from Manufacturing Date.

**11. PACKING DETAILS**

250ml Plastic Bottle



Ice Packing



Final Packing



**12. VISCOSITY CHANGE ACCORDING TO TEMPERATURE**

1) Equipment: Brookfield Viscometer, Spindle # 2, 6rpm

20℃	25℃	30℃	35℃	40℃	Remark
2,325 cps	1,700 cps	1,400 cps	1,225 cps	1,125 cps	Brookfield, Spindle # 2, 6rpm

**13. COMPOSITION/INFORMATION ON INGREDIENTS**

COMPONENT		CONCENTRATION (% by weight)	REMARKS
Resin	BISPHENOL F	50.0 ~ 60.0	
	POLYSULFIDE MODIFIED EPOXY RESIN	5.0 ~ 10.0	
	POLYPROPYLENE GLYCOL DIGLYCIDYL ESTER	15.0 ~ 25.0	
Hardener	AMINE ADDUCT	10.0 ~ 20.0	
	MODIFIED POLYAMINE	5.0 ~ 10.0	
Pigment	CARBON BLACK	0.1 ~ 0.2	



## HI-TECH KOREA CO., LTD.

# 191-7, SUWOLAM-RI, SEOTAN-MYEON, PYEONGTAEK-SI, KYEONGGI-DO, KOREA

TEL : +82-31-665-5093~4 // FAX : +82-31-611-9783

URL : <http://www.hitechkorea92.com> // Email : [hitechkorea92@unitel.co.kr](mailto:hitechkorea92@unitel.co.kr)

### 14. REGULATORY INFORMATION

RELEVANT LAWS AND REGULATIONS	RESTRICTION
The Fire Services Act	None
Labor Safety and Hygiene Management Regulations	None
Toxic Chemical Materials Delivery and Management Regulations	None
Pollution Prevention and Control Act	None Restricted Hazardous Materials

### 15. VALIDITY PERIOD

Validity Period for this datasheet is 1 year. However, it will be extended if both parties have no objection.

### 16. PRIOR APPROVAL

If the contents herein need to be changed, prior notification and draft datasheet will be given. Your approval must be required.