



FH8014 Data Sheet

Electronic Materials Underfill Material

Material Description

FH8014 is a single component heat curable reworkable epoxy CSP/BGA underfill.

This material is designed to improve the reliability of fine-pitch chip scale package (CSP) and wafer level packaging (WLCSP) assembly.

Features & Benefits

- Fast Flow at Room Temperature
- Fast cure at moderate temperature minimizing stress on components.
- Reworkable without damage to the attach pad
- Pot life extend to 4 days

Curing Profile

Recommended cure: 30 minutes @ 100°C
 15 minutes @ 120°C
 10 minutes @ 150°C

Curing speed will vary depending on oven temperatures profile efficiency, printed circuit board thickness

Contact HB Fuller technical support for additional curing recommendations.

Typical Uncured Properties	
Property	Value
Color	Opaque cream yellow liquid
Specific Gravity	1.15
Viscosity (Brookfield CP42 50 rpm @25°C, cps)	1560
Working Pot Life (days)	4

Physical Properties of Cured Material		
Property	Test Method	Value
Hardness, Shore D	ASTM D-2240	80
Elongation at break %	ASTM D-0412	2.5
Transition temperature (Tg), °C		60.0
Coefficient of thermal expansion, m/m·°C	ASTM E-831	α 1 = 71.7 α 2 = 249.3
Thermal Conductivity (W/m °C)	ASTM D-2214	0.21
Water Absorption (% 24 hours @25°C)		0.15

Typical Electrical Properties (Cured)		
Property	Test Method	Value
Dielectric Strength, kV/mm	ASTM D-149	16.3
Surface Resistivity, ohm	ASTM D-257	1.5 x 10 ¹⁶
Volume Resistivity, ohm·cm	ASTM D-257	4.1 x 10 ¹⁶

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Preparation for Material Usage

1. Do not open the package before complete the thawing.
2. Thawing to room temperature (25°C) before using.
3. Seal any remaining material and store immediately at 2-8°C.
4. We do not recommend thawing material more than three times.

Contact HB Fuller technical support for additional material handling recommendations.

Storage & Shelf Life

FH8014 is supplied in 30ml/syringes
It should be stored in a 2-8°C refrigerator.
Shelf life is 6 months from date of manufacture.

Clean-Up

Equipment, brushes, and spillage can be cleaned promptly after use with a mixture of anhydrous isopropyl alcohol and acetone that should be discarded after each use.

Health & Safety Precautions

Please see the Material Safety Data Sheet (MSDS) for proper handling and disposal instructions.

Note

The values noted in this data sheet are typical properties only and are not intended to be used as material specifications.

For assistance in writing a material specification please contact HB Fuller for future details.

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