



HYSOL® FP6100

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PRODUCT DESCRIPTION

Hysol® FP6100 is an unfilled flexible epoxy designed as a removable CSP or BGA underfill. It exhibits very high flow properties when heated. FP6100 exhibits high adhesion to flexible and rigid circuit substrates. When fully cured, FP6100 forms a low modulus, low stress seal that dissipates impact stresses on solder joints and circuit boards.

TYPICAL APPLICATIONS

Removable CSP or BGA underfill

PROPERTIES OF UNCURED MATERIAL

Color	Black
Filler Content, %, ignition (ITM3A)	NA
Shelf Life @-40°C (-40°F), months	9

Typical Value

Viscosity @ 25°C, (77°F) (ITM2A) Cone & Plate, (Brookfield) Spindle 52, Speed 20, Cp	7,900
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PHYSICAL PROPERTIES, CURED MATERIAL

Color	Black
Coefficient of Linear Thermal Expansion, in/in/°C, (ITM65B)	
α_1 (40°-120°C)	94
α_2 (190-220°C)	214
Glass Transition, (Tg), °C, (ITM65B))	0
Young's Modulus, Mpa (ASTM D790)	42
Elongation, % (ASTM D790)	124

Handling

Pot Life @ 25°C, 77°F, hours, (ITM10T), (time to double in viscosity)	16
Gel Time @ 121°C, (250°F), minutes (ITM10N)	7

Frozen storage at -40°C or lower is required for maximum shelf life. Frozen packages must be completely thawed before use. Warm at room temperature until no longer cool to the touch (normally 20-30 minutes). Do not thaw in an oven.

Devices with wet encapsulant should not be exposed to humidity in the air and should be promptly post-cured according to suggested cure to achieve full properties. If the material cannot be initially gelled to a hard finish within 1 hour after dispensing, storage in a dessicator cabinet is suggested until full curing is possible.

GENERAL INFORMATION

For safe handling information on this product, consult the Material Safety Data Sheet, (MSDS).

This product is not recommended for use in pure oxygen and/or oxygen rich systems and should not be selected as a sealant for chlorine or their strong oxidizing materials

Cure Schedule

Recommended Cure 5-10 minutes @ 150°C

Alternate Cure 5 minutes @ 165°C

Removal Procedure

1. Heat component to 220°C using direct and/or hot gasses
2. Shear or lift component to remove
3. Apply heat and flux to soften underfill and solder
4. Remove using vacuum or light abrasion
5. No additional redressing is necessary
6. Continue rework process with application of new part

Note

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Loctite Electronics

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