



HYSOL®FP4460

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PRODUCT DESCRIPTION

Hysol® FP4460 is a high purity, low stress glob top semiconductor encapsulant with improved moisture resistance and working life compared to earlier generation products. Pressure pot performance on live devices is up to 500 hours with no failures, depending upon device and package type. This material is designed for temperature cycling ranges up to -65°C to 150°C. Hysol® FP4460 may be suitable for bare chip protection in a variety of advanced packages such as IC memory cards, chip carriers, hybrid circuits, chip-on-board, multi-chip modules, ball grid arrays and pin grid arrays. The high temperature performance; and excellent resistance to chemicals, moisture and handling damage is also advantageous for automotive applications.

TYPICAL APPLICATIONS

Glob top

PROPERTIES OF UNCURED MATERIAL

Color	Black
Filler Content, %, (ITM3A)	75
Specific Gravity, (ITM9A)	1.78
Shelf Life @-40°C (-40°F), months	9
	Typical Value
Viscosity @ 25°C, (77°F)	
(ITM2A) Brookfield RVT,	
Spindle 7, Speed 4, Cp	420,000
Spindle 7, Speed 10, Cp	300,000

PHYSICAL PROPERTIES, CURED MATERIAL

Coefficient of Thermal Expansion, in/in/°C	
(ITM65B)	
(40°C-120°C)	20 x 10 ⁻⁶
Glass Transition, (Tg),°C,(ITM65B)	165
Glob Height, 0.2 gram mass, mm (ITM22G)	2.0
Linear Shrinkage, % (ITM90G)	0.135
Extractable Ionic Content (ITM107B)	
Chloride (Cl-), ppm	20
Sodium (Na+), ppm	20
Potassium (K+), ppm	20

HANDLING

Pot Life @ 25°C, 77°F, hours	24
(ITM10T), (Time to double viscosity)	
Gel Time @ 121°C, (250°F), minutes	9
(ITM10N)	

Do not store above -40°C. Frozen packages must be completely thawed before use. Warm at room temperature until no longer cool to the touch (normally 20-60 minutes. Do not thaw in an oven. Elevated temperatures reduce working life. reduces working life.

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	1 hour @ 125°C plus 2 hours @ 165°C
Alternate Cure	3 hours @ 170°C

Use suggested cure schedules as general guidelines; other cure schedules may yield satisfactory results.

Note

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Loctite Electronics

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