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LoSTRESS™ Liquid Encapsulant SF5002

TECHNICAL DATA SHEET 638

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DESCRIPTION

Polysciences, Inc. LoSTRESS™ Liquid Encapsulant is a new generation of low modulus, flame retardant fill material specifically designed to offer low cure stress and low warpage. LoSTRESS™ Liquid Encapsulant is a novel epoxy based 100% solids, one component, liquid encapsulant designed for encapsulation of semiconductor devices requiring high toughness and strong adhesion to various substrates such as metal, ceramic and organic.

CUSTOMER BENEFITS

LoSTRESS™ Liquid Encapsulant offers the following distinct advantages:

- Very little warpage on HTC and LTCC substrates for easy downstream process
- Minimal cure stress on sensitive devices such as thin ceramic SAW filters
- High adhesion to die, substrates and most other interfacing materials

UNCURED (WET) PROPERTIES

Color Black
Specific Gravity 1.14
Viscosity @ 25°C RVDV-II+, Spindle 27)
11,000 cps @ 5 rpm
Thixotropic Index (5/0.5 rpm)
1.6
Pot Life @ 25°C >16 hours @ RT
Storage Life >6 months @ -40°C

PROCESS PARAMETERS

Thawing

For best dispensing, thaw for 1 hour at RT

Cure Schedule

90 minutes @ 90°C
+60 minutes @ 150°C
+60 minutes @ 160°C

CURED PROPERTIES

Glass Transition Temp. (Tg) by DMA
<20°C

Coefficient of Thermal Expansion (CTE)
Below Tg 149ppm/°C
Above Tg 240 ppm/°C

Modulus (Tensile)
<5 MPa @ 25°C

Moisture Absorption after 192 hrs 30°C/60% RH
0.4%

Decomposition Temp. (<2% weight loss)
180°C

Extractable Ionic Content
Na <5ppm
K <5ppm
Cl <10ppm

Dielectric Constant
3±0.03 at 2GHz

STORAGE AND HANDLING

Shipping Recommended temperature is -40°C
Storage Store at -40°C for up to 12 months
Safety Normal safety precautions for epoxy resins should be observed. Refer to MSDS for details.

All values are considered to be typical based on tests believed to be accurate. Polysciences, Inc. may change the data as appropriate.

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