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TECHNICAL DATA SHEET 638

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LoSTRESSTM Liquid Encapsulant SF5002

Polysciences, Inc. *Lo***STRESS[™]** Liquid Encapsulant is a new generation of low modulus, flame retardant fill material specifically designed to offer low cure stress and low warpage. *Lo***STRESS[™]** Liquid Encapsulant is a novel epoxy based 100% solids, one component, liquid encapsulant designed for encapsulation of semiconductor devices requiring high toughness, flame retardancy 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 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 11000 cps @ 5 rpm Thixotropic Index (0.5/5 rpm) 1.6 Pot Life @ 25°C >16 hours

Storage Life >6 months @ -40°C

Process Parameters

Thawing For best dispensing, thaw for 1 hour at room temperature

Cure Cycle 90 min. @ 90°C + 60 min @ 150°C + 60 min @ 160°C

Cured Properties

Glass Transition Temperature (Tg) by DMA <20°C Coefficient of Thermal Expansion (CTE) Below Tg 149 ppm/ °C 240 ppm/ °C Above Tg Modulus (Tensile) 5 MPa @ 25°C Moisture Absorption after 192 hrs 30°C/60% RH 0.4% Decomposition Temperature (<2% weight loss) 180°C Extractable Ionic Content (Na, K, Cl) Na <5ppm Κ <5ppm CI <10ppm **Dielectric Constant** 3±0.03 at 2GHz Storage and Handling Shipment Recommended temperature is -40°C Storage Store at -40°C for up to 6 months Safety Normal safety precautions for epoxy resins should be observed. Refer to MSDS for details. All values are considered typical based on tests believed to be accurate. Polysciences, Inc. may change the data as appropriate.

Ordering Information

In The U.S. Call: 1-800-523-2575 • 215-343-6484 In The U.S. Fax: 1-800-343-3291 • 215-343-0214

In Europe Call: (49) 6221-756767 In Europe Fax: (49) 6221-764620

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