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TECHNICAL DATA SHEET 668

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Opti**CLEAR™** Liquid Encapsulant Fill SF503A

DESCRIPTION

Polysciences, Inc. *Opti*CLEAR™ liquid encapsulant is a new generation of modulus fill material specifically designed to offer efficient light transmission and low cure stress. Polysciences' *Opti*CLEAR™ encapsulant is a novel 100% solids, one component, unfilled, liquid encapsulant designed for encapsulation of semiconductor devices requiring high toughness and strong adhesion to various substrates such as metal, ceramic and organic. SF503A can be cured by heat or rapidly by UV light.

CUSTOMER BENEFITS

*Opti*CLEAR [™] Liquid Encapsulant offers the following distinct advantages over anhydride-based epoxy systems:

- Highly efficient transmission of incident light and very little change after exposure to high heat
- Efficient material utilization resulting from extended pot life at room temperature
- Contamination free processing due to very low cure volatiles
- High Tg

UNCURED (WET) PROPERTIES

Color Clear, Colorless

Specific Gravity 1.2

Viscosity @ 25°C (RVDV-II+, 14/6R 10rpm)

1500 cps

PROCESS PARAMETERS

Cure Cycle

UVA (320-400nm): 7.5 J.cm²/3mm section

Alternate Cure Cycle 2 hours @ 130°C

CURED PROPERTIES

Glass Transition Temperature (Tg)

>100°C

Coefficient of Thermal Expansion (CTE)

Below Tg 70 ppm/°C Above Tg 200 ppm/°C

Extractable Ionic Content (Na, K, CI)

< 20 ppm

Refractive Index

1.54

STORAGE AND HANDLING

Storage 12 months @ <5°C

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.

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