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TECHNICAL DATA SHEET 701

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Liquid Encapsulant HV400A&B

Low Viscosity Low Cost

DESCRIPTION

HV400 is a two part low cost addition cured silicone. This silicone system is designed for applications that require low stress and excellent electrical properties. HV400 is designed for potting and encapsulation where low cost and low viscosity is required and has an easy to use 1:1 mix ratio by weight or volume. Can be room temperature cured or heat cured. The addition of heat will greatly accelerate the cure. Can be used in temperature extremes of -40°C to 200°C.

HV400, as with all addition cured silicones, has no exotherm and very low shrinkage upon cure. During cure, HV400 will not evolve any by products. Also, they will not depolymerize as many condensation cured silicones are prone to do. Should HV400 prove inadequate to meet your needs, this easy to use formulation can be customized to address your particular and unique applications.

UNCURED PROPERTIES

Color Off White

Specific Gravity @ 25°C

Part A 1.77

Part B 1.77

Part C 1.77

Viscosity (RVDV-II+, Spindle 7 @ 10 rpm @ 25°C)

Part A 10,000 cps

Part B 10,000 cps

Part C 10,000 cps

PROCESS PARAMETERS

In order to obtain a uniform mixture, HV400 Part A and B, should be mixed prior to use as the material may settle over time.

The HV400 has a convenient 1:1 mix ratio by weight or volume. Variation from recommended mix ratios will cause variation in the finished product. In order to achieve a correct mix ratio a scale or balance should be used to portion out the Part A and Part B.

HV400 needs to be mixed thoroughly, scraping all sides and bottom of the container, as even small amounts of unmixed materials can cause irregularities of the cured and finished product.

If necessary, the HV400 is now ready for de-airing. Ideal electrical properties of a material are best obtained when air bubbles and voids are removed from the system.

HANDLING PROPERTIES

Mix Ratio per 100 parts A

By Weight B 100

By Volume B 100

Pot Life @ 25°C 45 minutes

Gel Time @ 25°C 65 minutes

CURED PROPERTIES

Hardness 82 Shore A

Thermal Conductivity 0.40

Tg by DMA >-80°C

CTE 190

ELECTRICAL PROPERTIES

Dielectric Constant @ 25°C (100KHz)

4.0

Dissipation Factor @ 25°C (100KHz)

0.004

Volume Resistivity @ 25°C (olms-cm)

4.3 x 10¹³

Dielectric Strength (volts/mil)

600

STORAGE AND HANDLING

Shipping Shipment temperature is @ 25°C

Storage Store at 25°C for up to 12 months

Safety 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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