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TECHNICAL DATA SHEET 696

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HV 300 A & B Liquid Encapsulant

Low Viscosity Thermally Conductive

DESCRIPTION

HV300 is a two-part thermally conductive addition cured silicone. This silicone system is designed for applications that require low stress and excellent high temperature electrical properties.

HV300 is designed for potting and encapsulation where high thermal conductivity is required. HV300 has been tested in our laboratories to be UL 94V-0. HV300 has an easy to use 1:1 mix ratio by weight or volume. HV300 can be room temperature cured or heat cured. The addition of heat will greatly accelerate the cure. HV300 can be used in temperature extremes of -40°C to 200°C.

HV300, as with all addition cured silicones, has no exotherm and very low shrinkage upon cure. During cure, HV300 will not evolve any by products. Also, they will not depolymerize as many condensation-cured silicones are prone to do. Should HV300 prove inadequate to meet your needs, this easy to use formulation can be customized to address your particular and unique applications.

UNCURED PROPERTIES

	Part A	Part B	Mixed
Color	Off White	Off White	Off White
Specific Gravity @ 25°C	2.13	2.13	2.13
Viscosity, CPS (RVDV-II, Spindle 7 @ 10rpm @ 25°C)	10,000	10,000	10,000

PROCESS PARAMETERS

In order to obtain a uniform mixture, HV300 Part A and B, should be mixed prior to use as the material may settle over time.

The HV300 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.

HV300 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 HV300 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 Part A	
By Weight B	100
By Volume B	100
Pot Life @ 25°C	45 minutes
Gel Time @ 25°C	65 minutes

CURED PROPERTIES

Hardness	78 Shore A
Thermal Conductivity	1.0
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)	4.3×10^{13}
Dielectric Strength (volts/mil)	600

STORAGE AND HANDLING

Shipping	Temperature @ 25°C
Storage	Store at 25°C for up to 12 months
Safety	Refer to MSDS for details

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