

U.S. Corporate Headquarters 400 Valley Rd. Warrington, PA 18976 1(800) 523-2575 / (215) 343-6484 1(800)343-3291 fax info@polysciences.com Polysciences Europe GmbH Handelsstrasse 3 D-69214 Eppelheim, Germany +(49) 6221-765767 +(49) 6221-764620 fax info@polysciences.de Polysciences Asia-Pacific, Inc. 2F-1, 207 Tunhwa N. Rd. Taipei, Taiwan 10595 (886) 2 8712 0600 (886) 2 8712 2677 fax info@polysciences.tw

TECHNICAL DATA SHEET 696

Page 1 of 1

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 @ 10rom @ 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 x 10¹³
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

North America (United States)

1 (800) 523-2575 / (215) 343-6484 1 (800) 343-3291 / (215) 343-0214 fax

Europe (Germany)

(49) 6221-765767 / (49) 6221-764620 fax

Asia-Pacific (Taiwan)

(886) 2 8712 0600 / (886) 2 8712 2677 fax

Online anytime at: polysciences.com

Should any of our materials fail to perform to our specifications, we will be pleased to provide replacements or return the purchase price. We solicit your inquiries concerning all needs for life sciences work. The information given in this bulletin is to the best of our knowledge accurate, but no warranty is expressed or implied. It is the user's responsibility to determine the suitability for their own use of the products described herein, and since conditions of use are beyond our control, we disclaim all liability with respect to the use of any material supplied by us. Nothing contained herein shall be construed as a recommendation to use any product or to practice any process in violation of any law or any government regulation.