



HYSOL[®] US5551

Formerly Loctite[®] 82896 R/C
Liquid Urethane Encapsulant

Formerly Dexter

Description

Hysol[®] US5551 (formerly Loctite[®] 82896R & C) is a flexible, mineral filled, castor/MDI based urethane potting compound. This material can be used for indoor/outdoor telecommunications equipment and general electronics and electrical potting/encapsulating jobs such as printed circuit boards or ballast transformers. This system is low cost, has good thermal conductivity, and adheres to a variety of substrates. It is a low odor system that does not utilize TDI or mercury compounds, so it is user friendly.

Application Characteristics	US5551	Test Method
Viscosity, cps @ 23°C	3,000 – 9,000	STP 2A
Working Time, @ 23°C	5 - 10 minutes	
Gel Time, 300 gm mass @ 23°C	15 - 25 minutes	
Recommended Cure Cycle		
Normal @ 23°C	2 - 3 hours	
Alternate @ 85°C	30 minutes	
Color	Black	Visual
Density, (g/cc)	1.52 – 1.60	STP 9A
Shelf Life, in unopened containers in cool, dry conditions	8 months	
Mix Ratio		
by weight Resin/Catalyst	13/87	
By volume Resin/Catalyst	1.0/5.18	

Typical Cured Properties	US5551	Test Method
Hardness, Shore A	79 - 89	STP 11A
24 Hour Water Moisture Absorption, %	0.015	STP 109A
Coefficient of Thermal Conductivity, Cal x cm/(sec x cm ² x °C)	16 x 10 ⁻⁴	STP 47C
Weight loss from exposure to heat, % 168 hrs @ 130°C	0.19	

Typical Electrical Properties		US5551		Test Method
Dielectric Strength, volts/mil (100 mls thick)		400		STP 48D
Dielectric Constant	@ 100 KHz	25°C 3.52	85°C 4.44	STP 53A
	@ 10 KHz	3.73	5.29	
Dissipation Factor	@ 100 KHz	0.0298	0.1265	STP 53A
	@ 10 KHz	0.0625	0.0777	
Volume Resistivity, ohm/cm		3.5 x 10 ¹³		STP 30H01

Directions for Use

Some settling of fillers and pigments will occur with time. Therefore, thorough mixing of components containing fillers or pigments is necessary prior to every withdrawal of material. Weigh needed quantities together and mix until homogeneous. Mixing takes 1 - 4 minutes depending on material quantity and viscosity. Try to choose a mixing container that will be ½ to ¾ full of material. This minimizes inclusion of bubbles into the mix. Use spatulas or mixing paddles appropriate to container size. Scrape the sides and bottom of the container while mixing. If a bubble free product is desired, it may be necessary to vacuum deair the separate components and/or the mixture. Vacuum pressure should be 1mmHg or less to be effective.

Once opened, blanket the remaining product with dry nitrogen or dry air. Reseal containers tightly and store in cool, dry conditions. Blanket and reseal containers immediately after each use. This protects the remaining material from moisture contamination. Use a drying tube on the ventilation opening of drums. Never store chemical containers exposed to weather or direct sunlight.

8/2001

For additional information in the Americas, please contact one of the following locations:

New York

TEL: 716.372.6300

FAX: 716.372.6864

Canada

TEL: 905.814.6511

FAX: 905.814.5391

Brazil

TEL: 011.55.11.4143.7000

FAX: 011.55.11.4143.7100

For a complete listing of worldwide locations and information on related products, please visit our website www.loctite.com/electronics

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Users should review the Material Safety Data Sheet (MSDS) and product label for the material to determine possible health hazards, appropriate engineering controls and precautions to be observed in using the material. Copies of the MSDS and label are available upon request
