



REV. 3.1

## PTE-36977

C6-56951  
C6-56995  
C6-56996

### DEFINITION

**PTE-36977**™ is a two-component epoxy designed for encapsulation or casting of high voltage coils and transformers where high temperature, high voltage, and high thermal conductivity are required. **PTE-36977**™ is heat stable up to 150°C.

### PRODUCT DESCRIPTION

Appearance	Viscous liquid
Odor	Faint
Color	Orange, Blue, Black

Property	Result	Methods
Viscosity @ 25°C	65,000 ± 20,000 mPa·s	Brookfield RVT, Spindle 27, Small Sample Adaptor, 10rpm
Viscosity @ 35°C	25,000 ± 10,000 mPa·s	

Other information			
Work life time @ 25°C	1 hour (viscosity doubles)		
Specific gravity @ 20°C (g/cm <sup>3</sup> )	1.75		
Possible curing cycles	<ul style="list-style-type: none"> <li>• 16-24 hours at 50°C and 6 hours at 125°C</li> <li>• 6 hours at 120°C, in small quantities.</li> <li>• 2 hours at 150°C, in small quantities.</li> <li>• 3 hours at 100°C, in small quantities.</li> </ul>		
Mix Ratio:	By weight:	Part A 100	Part B 9
Shelf Life	One year in original unopened containers.		

**PROTAVIC AMERICA, INC.**

TEL: & FAX: 800.807.2294 / INT'L: 978.372.2016

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### **APPLICATION PROPERTIES**

- **PTE-36977™** is recommended for the casting and/or encapsulation of high voltage coils and transformers.
- **PTE-36977™** is available in orange, black or blue.

### **APPLICATION RECOMMENDATIONS**

- Warm-up only **PTE-36977™** Part A to 35-38°C (95-100°F). Add **PTE-36977™** Part B, mix thoroughly. Degas to 0.5mm Hg or less until all air has been removed (10-15 minutes).

### **TYPICAL PROPERTIES OF CURED PTE-36977™**

The properties listed below were determined from measurements carried out in a limited number of tests. These properties are given as guidance, and do not constitute a guarantee. It will be for the user, in all cases, to carry out their own tests to determine whether **PTE-36977™** is suitable for the user's particular application.

<b>Property</b>	<b>Result</b>	<b>Methods</b>
Shrinkage on Cure	0.20 %	
Shore D Hardness	95	ASTM D2240
Thermal Conductivity	1.15 W/M/K	
Coefficient of Thermal Expansion	22 x 10 <sup>-6</sup> /°C	TMA1

### **ELECTRICAL PROPERTIES**

<b>Property</b>	<b>Result</b>	<b>Methods</b>
Volume Resistivity <ul style="list-style-type: none"><li>• 100 V</li><li>• 500 V</li><li>• 1000 V</li></ul>	5.8 X 10 <sup>16</sup> Ω-cm 12.8 X 10 <sup>16</sup> Ω-cm 8.2 X 10 <sup>16</sup> Ω-cm	ASTM D257
Dielectric Constant/Dissipation Factor <ul style="list-style-type: none"><li>• 120 Hz</li><li>• 1000 Hz</li></ul>	4.32/0.0022 4.40/0.0022	ASTM D150
Dielectric Strength (1.6 mm thickness)	20kV/mm (510 V/mil)	ASTM D149

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**ACCELERATED AGING, 1000 HOURS AT 152 °C**

<b>Property</b>	<b>Result</b>	<b>Methods</b>
Volume Resistivity <ul style="list-style-type: none"><li>• 100 V</li><li>• 500 V</li><li>• 1000 V</li></ul>	2.3 X 10 <sup>16</sup> Ω-cm 5.8 X 10 <sup>16</sup> Ω-cm 6.4 X 10 <sup>16</sup> Ω-cm	ASTM D257
Dielectric Constant/Dissipation Factor <ul style="list-style-type: none"><li>• 120 Hz</li><li>• 1000 Hz</li></ul>	4.61/0.0016 4.57/0.0028	ASTM D150
Weight Loss	0.29 %	
Shrinkage (linear)	0.25%	
Shore D Hardness	95	ASTM D2240
Decomposition Temperature	350°C	TGA 1
NASA Outgassing	0.75% TML 0.05%CVCM 0.17%WVR	ASTM 595

**PRECAUTIONS IN USE**

Refer to the attached material safety data sheet.

**PACKAGING**

Contact Protavic America, Inc. for more Information

The information contained in this data sheet corresponds to the present state of our knowledge; it is intended for your guidance but we are not bound by it since we are not in a position to exercise control over the manner in which our products are used. Moreover, the attention of the user is drawn to the risks that could possibly occur should a product be used for an application other than that for which it is intended.