



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 ³)	1.75		
Possible curing cycles	<ul style="list-style-type: none"> • 16-24 hours at 50°C and 6 hours at 125°C • 6 hours at 120°C, in small quantities. • 2 hours at 150°C, in small quantities. • 3 hours at 100°C, in small quantities. 		
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.

Property	Result	Methods
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 ⁻⁶ /°C	TMA1

ELECTRICAL PROPERTIES

Property	Result	Methods
Volume Resistivity <ul style="list-style-type: none">• 100 V• 500 V• 1000 V	5.8 X 10 ¹⁶ Ω-cm 12.8 X 10 ¹⁶ Ω-cm 8.2 X 10 ¹⁶ Ω-cm	ASTM D257
Dielectric Constant/Dissipation Factor <ul style="list-style-type: none">• 120 Hz• 1000 Hz	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

Property	Result	Methods
Volume Resistivity <ul style="list-style-type: none">• 100 V• 500 V• 1000 V	2.3 X 10 ¹⁶ Ω-cm 5.8 X 10 ¹⁶ Ω-cm 6.4 X 10 ¹⁶ Ω-cm	ASTM D257
Dielectric Constant/Dissipation Factor <ul style="list-style-type: none">• 120 Hz• 1000 Hz	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.