PTE-36977

REV. 3.1

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 @ 25ºC	1 hour (viscosity doubles)		
Specific gravity @ 20ºC (g/cm³)	1.75		
Possible curing cycles	• 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.		

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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 weather **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 • 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 • 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

ACCELERATED AGING, 1000 HOURS AT 152°C

Property	Result	Methods
Volume Resistivity • 100 V • 500 V • 1000 V	 $2.3 \times 10^{16}\Omega$-cm $5.8 \times 10^{16}\ \Omega$-cm $6.4 \times 10^{16}\ \Omega$-cm	ASTM D257
Dielectric Constant/Dissipation Factor • 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