



PTE-47851™

Rev: 3.2
C6-57564A
C6-57565B

DEFINITION

PTE-47851™ is a medium viscosity versatile epoxy casting system that exhibits unusually high thermal conductivity, and low thermal expansion. This product is designed for use in a four to one volumetric mix ratio, side by side dispensing system(50ml cartridge etc.). It is recommended for small electrical/electronic casting and encapsulating applications that require a unique combination of excellent wetting, flow, good thermal expansion properties, thermal shock resistance, and outstanding electrical properties.

PRODUCT DESCRIPTION

Appearance	Liquid
Odor	Faint
Color (May be modified to meet your requirements)	black

Property	Result	Methods
Viscosity	40,000 mPa·s mixed +/- 5,000 mPa's	Brookfield RVT, Spindle 27, Small Sample Adaptor, 10 rpm, 25°C

Other information			
Work life time @ 25 ± 2°C	60 minutes (viscosity doubles)		
Gel Time @ 25°C	75 minutes (depending on mass and substrates)		
Full Cure Time @ 25°C	24 hours		
Fixture/Handling Time @ 25°C	1.5 hours		
Fixture/Handling Time @ 65°C	20 minutes		
Mix Ratio:	By weight:	Part A 100	Part B 12.5
	By Volume:	Part A 100	Part B 25
Possible curing cycles	24 hours at 25°C		
	20 minutes @ 65°C (150°F)		
Specific gravity @ 25°C (g/cm³)	2		
Storage stability (unmixed)	1 year at room temperature		

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APPLICATION PROPERTIES

- **PTE- 47851™**, when fully cured, is highly resistant to moisture, hot water, steam, hot antifreeze solutions, automotive fluids, detergents, gasoline, hydraulic fluids, plasticizers, cleaning agents, acids, and bases.
- **PTE-47851™** is highly resistant to vibration and can be thermal cycled between -40 and 150°C.

TYPICAL PROPERTIES OF CURED PTE-47851™

The properties set out below were determined following measurements carried out in the laboratory over a small number of tests. They are values given by way of 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 the **PTE-47851®** resin can be used for the particular application the user has in mind.

PHYSICO-CHEMICAL PROPERTIES

Properties	Methods	Units	Typical values
Cure 1 hours @ 65°C (150°F)			
Shore D hardness	ASTM D2240	-----	90
Lap shear to Al	ASTM D3163	psi	3000
Operating temperature		Degrees C	-65 to 150
Tg		Degrees C	122

ELECTRICAL PROPERTIES

Properties	Methods	Units	Typical values
Volume Resistivity • 100 V • 500 V	ASTM D257	Ω-cm	• 8.0 x 10 ¹⁴ • 6.3 x 10 ¹⁴
Dielectric Constant • 120 Hz • 1000 Hz	ASTM D150	--	• 4.3 • 4.3
Dissipation Factor • 120 Hz • 1000 Hz	ASTM D150	--	• 0.002 • 0.002
Thermal conductivity		W/(mK)	• 1.3

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PRECAUTIONS IN USE

Refer to the attached material safety data sheet.

PACKAGING

PTE-47851 is available in two component kits, and twin syringe cartridges like Mixpac™.

For sizes and part numbers, contact Protavic America, Inc.

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.

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