



1/15/2008

## PNU-46202™

### DEFINITION

**PNU-46202™** is an electronics grade; unfilled, room temperature fast curing; two-component polyurethane adhesive is designed for the adhesion and encapsulation of circuit boards, circuit board components and for screw-thread sealing. The cured materials provide long-term circuit protection and bond stability from -55°C to 100°C. **PNU-46202™** bonds well to most metals, ceramics and plastics as well as to epoxy and paper phenolic circuit boards. The clarity of **PNU-46202™** allows examination of all encapsulated components and circuit boards. **PNU-46202™** is available in self-mixing **MixPac®** for field use and in plant applications.

### PRODUCT DESCRIPTION

Appearance	Liquid
Odor	Faint
Color (May be modified to meet your requirements)	WATER CLEAR (& colors)

Property	Result	Methods
Viscosity	8,000 mPa·s	Brookfield RVT, Spindle 27, Small Sample Adaptor, 10 rpm, 25°C

Other information	
Work life time @ 25 ± 2°C	5 minutes
Gel Time @ 25°C	15 minutes
Full Cure Time @ 25°C	24 hours (in thin films)
Possible alternate curing cycles	30 seconds @ 65°C (149°F) 10 seconds @ 95°C (203°F)
Mix Ratio:	1:1 Weight and Volume
Specific gravity @ 25°C (g/cm <sup>3</sup> )	1.2
Storage stability (unmixed)	1 year at room temperature

### **APPLICATION PROPERTIES**

- **PNU-46202™** polymer backbone provides excellent flexibility at low and high temperatures, UV and moisture resistance.
- **PNU-46202™** has low shrinkage on curing.
- **PNU-46202™** has excellent adhesion to most substrates without primers.
- **PNU-46202™** is unaffected by soldering or cleaning processes.

### **APPLICATION RECOMMENDATIONS**

- Because of the high reactivity, of the components of **PNU-46202™**, it is recommended that **PNU-46202™** be used in the MixPac™ dispensers. See packing requirements.

### **TYPICAL PROPERTIES OF CURED PNU-46202™**

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 **PNU-46202™** resin can be used for the particular application the user has in mind.

<b>Properties</b>	<b>Methods</b>	<b>Units</b>	<b>Typical values</b>
Shore A hardness	ASTM D2240	-----	80
Lap shear to AL @ 25°C	ASTM D3163	psi	2,000
Glass Transition Temperature (Tg)	DSC 1	°C	-38

### **ELECTRICAL PROPERTIES**

<b>Properties</b>	<b>Methods</b>	<b>Units</b>	<b>Typical values</b>
Volume Resistivity <ul style="list-style-type: none"><li>• 100 V</li><li>• 500 V</li></ul>	ASTM D257	$\Omega$ -cm	<ul style="list-style-type: none"><li>• <math>6.5 \times 10^{13}</math></li><li>• <math>4.6 \times 10^{13}</math></li></ul>
Dielectric Constant <ul style="list-style-type: none"><li>• 120 Hz</li><li>• 1000 Hz</li></ul>	ASTM D150	--	<ul style="list-style-type: none"><li>• 4.63</li><li>• 4.41</li></ul>
Dissipation Factor <ul style="list-style-type: none"><li>• 120 Hz</li><li>• 1000 Hz</li></ul>	ASTM D150	--	<ul style="list-style-type: none"><li>• 0.027</li><li>• 0.027</li></ul>

### **PRECAUTIONS IN USE**

Refer to the attached material safety data sheet.

### **PACKAGING**

**PNU-46202™** is available in two-part **MixPac®** and as kits for meter mix systems. For part number and kit size information please contact Protavic America, Inc.