



PNU-46220

DEFINITION

PNU 46220™ 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 46220™ bonds well to most metals, ceramics and plastics as well as to epoxy and paper phenolic circuit boards. The clarity of PNU 46220™ allows examination of all encapsulated components and circuit boards. PNU 46220™ 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)	Clear

Property	Result	Methods
Viscosity (mPa's)	Part A 2250 Part B 1250 Mixed 1500	Brookfield RVT, Spindle 27, Small Sample Adaptor, 10 rpm, 25°C

Other information	
Work life time @ 25 ± 2°C	15 minutes
Gel Time @ 25°C	30 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/cm³)	1.2
Storage stability (unmixed)	1 year at room temperature

APPLICATION PROPERTIES

- **PNU 46220™** polymer backbone provides excellent flexibility at low and high temperatures, UV and moisture resistance.
- **PNU 46220™** has low shrinkage on curing.
- **PNU 46220™** has excellent adhesion to most substrates without primers.
- **PNU-46220™** is unaffected by soldering or cleaning processes.

APPLICATION RECOMMENDATIONS

- Because of the high reactivity, of the components of **PNU 46220™**, it is recommended that **PNU 46220™** be used in the MixPac™ dispensers. See packing requirements.

TYPICAL PROPERTIES OF CURED PNU 46220™

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 46220™** resin can be used for the particular application the user has in mind.

Properties	Methods	Units	Typical values
Shore A hardness	ASTM D2240	-----	65
Lap shear to AL @ 25°C	ASTM D3163	psi	TBD
Glass Transition Temperature (Tg)	DSC 1	°C	-40

ELECTRICAL PROPERTIES

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

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.