



TECHNICAL DATA SHEET Tacusil PUA501R

10/20/2021

DESCRIPTION:

Tacusil PUA501R Black is a two-part black polyurethane that will cure at room temperature. It is commonly used for LED encapsulation, doming, along with other high quality castings. This product has been formulated to provide excellent long-term non yellowing UV stability. It has a low viscosity and is easy to mix and process.

TYPICAL PROPERTIES:

All properties given are at 25 °C unless otherwise noted.

Property:	Value:	Test Method or Source:
Color	Black	Visual
Mix Ratio	Part A to Part B	Calculated
By weight	108 to 113	
By Volume	1:1	
Cure Schedule	48hours @RT	
Viscosity – Part A	1200 cps @1/s	Rheometer parallel plate 25mm@1/s
Viscosity – Part B	4000cps @1/s	
Viscosity - Mixed	2500cps @1/s	
Specific Gravity – Part A	1.08	Calculated
Specific Gravity – Part B	1.13	
Specific Gravity - Mixed	1.1	
Pot Life,	30mins	Rheometer parallel plate 25mm@1/s
Gel Time	75minutes/50cc sample	Gardco Hot Pot Gel Timer
Glass Transition Temperature/Tg	-20°C	DSC
Hardness	75 Shore A	ASTM D2240
Water Absorption	0.5% after 24 hours	ASTM D570
Tensile Properties:		ASTM D638/MTS
Strength	1280 psi	
Elongation	100%	
Modulus	400 psi	
Bulk Resistivity	15 ohm-cm	Jandel 4 point probe
Non volatile content	100 %	

This TDS contains values that have been updated. The values reported in this technical data sheet are typical values of the product, and are highly dependent on test conditions and methodology. We actively seek the most precise and accurate ways to measure and interpret performance of our products, and to update estimated values with measured values. The formula has not been revised or changed in any way. Although the values on paper have changed, you can expect the same performance of the product.

INSTRUCTIONS:

1. Cartridge format: Mixer should be attached keeping the cartridge vertical and any air pocket purged this way. Attach a new static mixer with each cartridge, then pre-bleed the first 3 inches of dispensed material or until a uniform color is obtained. Maintain adequate velocity during dispensing to ensure complete mixing.



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2. Bulk format: stir until homogeneous weigh and mix parts A and B accurately and thoroughly, scraping sides of container often. Do not pour from mixing container, transfer to a new container as residual unmixed material may cause a tacky spot on the surface of the casting.
3. Allow to cure undisturbed until product is fully gelled or tack-free to the touch.
4. Clean up uncured resin with suitable organic solvent such as MEK, acetone or other organic solvent.

SHELF LIFE AND STORAGE:

12 months at 25 °C in bulk package
Specialty packaging may be less.

Isocyanates are sensitive to moisture and should be kept in their original container or in a volume tank under dry nitrogen blanketing. Many isocyanates are prone to dimerization, the formation of a white precipitate. Products with minor amounts of this precipitate normally cure to full properties. Storage at 20 - 30 °C (68 °F to 86 °F) is recommended to ensure full shelf life