



TECHNICAL DATA SHEET PUA508 Black

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DESCRIPTION:

Tacusil PUA508 Black is a two-part general purpose urethane suitable for potting and encapsulation of electronic devices. It is formulated at a 4:1 volume ratio for ease of use in automatic mixing equipment and is available in both bulk and cartridge formats. This low-viscosity formulation gels in less than 20 minutes at 50 ml volume and reaches full cure within 72 hours at room temperature. Higher temperatures will accelerate the cure. PUA508 Black contains soft, low-abrasion fillers that can separate over time, although they have good resistance to hard settling.

TYPICAL PROPERTIES:

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

Property:	Value:	Test Method or Source:
Color		Visual
Part A	Black	
B	Brown	
Mixed	Black	
Mix Ratio	Part A to Part B	Calculated
By weight	5 to 1	
By volume	4:1	
Cure Schedule	48 hours @RT	
Viscosity – Part A	13000 cps @1/s	Rheometer parallel plate 25mm@1/s
Viscosity – Part B	360cps @1/s	
Viscosity - Mixed	2500cps @1/s	
Specific Gravity – Part A	1.52	Calculated
Specific Gravity – Part B	1.21	
Specific Gravity - Mixed	1.44	
Pot Life	6 minutes	Rheometer parallel plate 25mm@1/s
Gel Time	18 minutes/50cc sample	Gardco Hot Pot Gel Timer
Glass Transition Temperature/Tg	0°C	DSC
Hardness	78 Shore A	ASTM D2240
Water Absorption	0.5% after 24 hours	ASTM D570
Tensile Properties:		ASTM D638/MTS
Strength	1500 psi	
Elongation	150%	
Modulus	400 psi	
Bulk Resistivity	1.0* 10E13 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 the 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 from the product.

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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.
2. Bulk format: Stir until homogeneous. Weigh and mix part A and B accurately and thoroughly, scraping the sides of the container frequently. 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 a suitable organic solvent such as MEK, acetone or other organic solvents.

SHELF LIFE AND STORAGE:

6 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, forming 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.

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