



TECHNICAL DATA SHEET Tacusil PUA505TC

02/14/2022

Room 9,11 Floor, Chuangxin Building Block 1#, No.1, Technology Road, Technology Chuangxin Park,
West of Dayabay, Huizhou City, Guangdong, China

DESCRIPTION:

Tacusil PUA505TC is a two-parts fast gel polyurethane adhesive with good thermal conductivity. It's designed for bonding application in EV battery and it also has good adhesion to versatile substrate including metal, ceramic and plastic. Tacusil PUA505TC was formulated to a 1A:1B volume mix ratio for use in side-by-side dispensing cartridges and meter/mix and dispense equipment. it will reach full cure after 72 hours under ambient conditions, elevated temperature will fast curing speed, 2hrs at 70 ° Cor 1hr at 90 ° Care sufficient. Full cured PUA505 is tough with flexibility and has good chemical resistance and mechanical impact resistance

TYPICAL PROPERTIES:

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

Property:	Value:	Test Method or Source:
Color		Visual
Part A	Black	
Part B	Brown	
Mixed	Black	
Mix Ratio	Part A to Part B	Calculated
By weight	100 to 100	
By Volume	1:1	
Cure Schedule	72hours @RT 1Hr@90C	
Viscosity – Part A	150000cps	Rheometer parallel plate 25mm@10/s
Viscosity – Part B	120000cps	
Viscosity - Mixed	130000cps	
Specific Gravity – Part A	2.1	Calculated
Specific Gravity – Part B	2.05	
Specific Gravity - Mixed	2.1	
Pot Life,	40mins	Rheometer parallel plate 25mm@1/s
Gel Time	100minutes/20cc sample	Gardco Hot Pot Gel Timer
Glass Transition Temperature/Tg	45°C	DSC
Hardness		ASTM D2240
72Hrs	70D	
1H@90C	75 Shore D	
Water Absorption	0.3% after 24 hours	
Thermal Conductivity	1.8W/M.k	ASTM D 5470
Tensile Properties:		ASTM D638/MTS
Strength	2000 psi	
Elongation	12.9%	
Modulus	15000 psi	
Bulk Resistivity	1.0E12 ohm-cm	Jandel 4 point probe
Non volatile content	100 %	

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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.
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:

6 months at 25 °C in cartridge with Aluminum foil 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 .