



TECHNICAL DATA SHEET EPA 2711FG

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

DESCRIPTION:

Tacusil EPA 2711FG is two-parts general purpose epoxy potting material with good thermal conductivity. It's medium viscosity and long work time under room temperature and designed for the application with high temperature resistance and impact resistance requirement.

It has good size stability, low shrinkage in curing process and adhesion to versatile substrate, such as metal, ceramic and some engineering plastic.

TYPICAL PROPERTIES:

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

Property:	Value:	Test Method or Source:
Color	Black (mixed)	Visual
Recommended Cure Schedule	72hours at RT or 1hours at 80C	
Work time	60mins	Gel timer
Gel time	180mins	
Mix Ratio (by weight)		Calculated
Part A	100	
Part B	10	
Viscosity		Haake Mars 40, 25mm plate, 1/S
Part A	95000cps	
Part B	80cps	
Mixed	13500cps	
Specific Gravity		Calculated
Part A	1.93	
Part B	0.98	
Mixed	1.84	
Glass Transition Temperature/Tg	135°C	by DSC
Hardness	90D 80D@105C	ASTM D2240
Water Absorption	0.05% after 24 hours	ASTM D570
Tensile Properties:		ASTM D638
Strength	7550 psi	
Elongation	0~1%	
Modulus	500,000 psi	
Compressive Properties:		ASTM D695
Strength	12,000 psis	
Modulus	650,000 psi	
Volume Resistivity	6×10^{13} ohm-cm*	
Thermal conductivity	1.3w/m.k	ASTM D 5470
Dielectric Strength	500V/mil* 20 kV/mm*	

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Flame Retardant	Can reach to V0 Level at 6mm thickness	UL 94
Coefficient of Thermal Expansion by TMA	42ppm/ °C below Tg 85ppm/ °C above Tg	455300005340 /ASTM E831 TMA, 5 °C/min
Temperature Rating**	-40 to 204°C	

* Asterisk denotes values considered typical to associated resin systems or extrapolated from other test results.

** Temperature Rating is based on average design requirements and is not intended as a guarantee of suitability for all applications operating at that temperature.

Approximate time to 95% cure at various temperatures by DSC

Temperature	95% cure
70°C	2hours
100°C	20minutes

NOTE: This chart reflects the thermal response of a very small sample run in a DSC, actual assemblies will require longer times to cure due to heat transfer, mass and method of heating. The cure schedule provided on page 1 provides times and temperatures more in line with use in a typical application.

INSTRUCTIONS:

1. Mixing these two parts as weight ratio, vacuum de-bubble under 3~5mmHg for 3mins
2. Cure it under room temperature or heat cure it.
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:

Part A

12months at room temperature (Swap the placement direct every month to avoid sinking)

Part B

12months at room temperature

Note: Tacusil EPA 2711FG part A contains heavy filler, bulk containers should be inverted every two weeks to reduce the accumulation of the flame retardant fillers on the bottom of the containers. In case filler settled , heating it at 60°C for an hour and then mixing it well, the cured material properties will not be effected. Exposure to higher temperature, or cycling of product temperature, will shorten product shelf life.