



Adhesive Films and Preforms

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## TF T2232F THERMALLY CONDUCTIVE FILM

### Description:

TechFilm T2232F is a high performance, high strength, highly thermally conductive\electrically insulating, B-staged film adhesive. It features a relatively low coefficient of thermal expansion, good adhesion to gold and high strength. It also features good chemical, heat, and moisture resistance. TechFilm T2232F will cure at temperatures above 130°C.

### Shelf Life: (Stored in dry conditions)

Two weeks @ 20°C    Two months @ 10°C    Three months @ -10°C    One year @ -40°C

### Cure Schedules:

Cure Schedule	30 minutes at 150°C
Alternate Cure Schedules	90 minutes at 130°C
	20 minutes at 160°C

### Cured Properties:

<u>Property</u>	<u>Method</u>	<u>Value Obtained</u>
Color	Visual	Grey
Specific Gravity	ASTMD 790	2.2
Volume Resistivity at 25°C, Ohm-cm	ASTMD 257	$>2.0 \times 10^{14}$
Lap Shear Strength to Aluminum at 25°C, psi	ASTMD 1002	2650
Lap Shear Strength to Gold at 25°C, psi	ASTMD 1002	2350
Thermal Conductivity, W/m-°K,	Theoretical	1.2
Glass Transition Temperature, DSC, inflection, °C	ASTME 1356	117
Linear Coefficient of Thermal Expansion, $\times 10^{-6}/^{\circ}\text{C}$		
Alpha 1 (below T <sub>g</sub> )	ASTME 831	47
Alpha 2 (above T <sub>g</sub> )	ASTME 831	245
Weight Loss at 150°C, TGA, 20°C/min, N <sub>2</sub> , %	ASTMD 3850	0.05
at 200°C	and MIL-STD-883	0.07
at 300°C	Section 3.8.5.1	0.60

All values reported above are typical values from the recommended cure, and are reported as a means of reference. Individual testing should be done to determine actual results, tested at specific conditions. Data should not be used for material specification purposes.

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