



Adhesive Films and Preforms

31 Dunham Road
Billerica, MA 01821Toll Free: (888) 832-4345
Fax: (978) 670-4956Email: info@techfilm.com
www.techfilm.com

TF T2531F

THERMALLY CONDUCTIVE FILM

Description:

TechFilm T2531F is a high performance, highly thermally conductive\electrically insulating, B-staged film adhesive. It features a relatively low coefficient of thermal expansion, high glass transition temperature and good adhesion to various substrates. It also features good chemical, heat, and moisture resistance. TechFilm T2531F will cure at temperatures above 130°C.

Shelf Life: (Stored in dry conditions)

One month @ 20°C Three months @ 10°C Six months @ -10°C One year @ -40°C

Cure Schedules:

Cure Schedule	60 minutes at 150°C
Alternate Cure Schedules	90 minutes at 140°C
	15 minutes at 150°C plus 15 minutes at 180°C
	120 minutes at 125°C

Cured Properties:

<u>Property</u>	<u>Method</u>	<u>Value Obtained</u>
Color	Visual	Grey
Specific Gravity	ASTMD 790	2.0
Volume Resistivity at 25°C, Ohm-cm	ASTMD 257	>2.0 x 10 ¹⁴
Lap Shear Strength to Aluminum at 25°C, psi	ASTMD 1002	1900
Thermal Conductivity, W/m-°K	ASTM E1461	1.3
Specific Heat Capacity, J/g-°K	ASTM E1461	1.11
Thermal diffusivity, cm ² /s-°K	ASTM E1461	0.0034
Glass Transition, loss modulus peak, °C	DMA	130
Linear Coefficient of Thermal Expansion, x 10 ⁻⁶ /°C		
Alpha 1 (below Tg)	ASTME 831	47
Alpha 2 (above Tg)	ASTME 831	245
Weight Loss at 150°C, TGA, 20°C/min, N ₂ , %	ASTMD 3850	0.05
	and MIL-STD-883	0.11
	Section 3.8.5.1	0.40

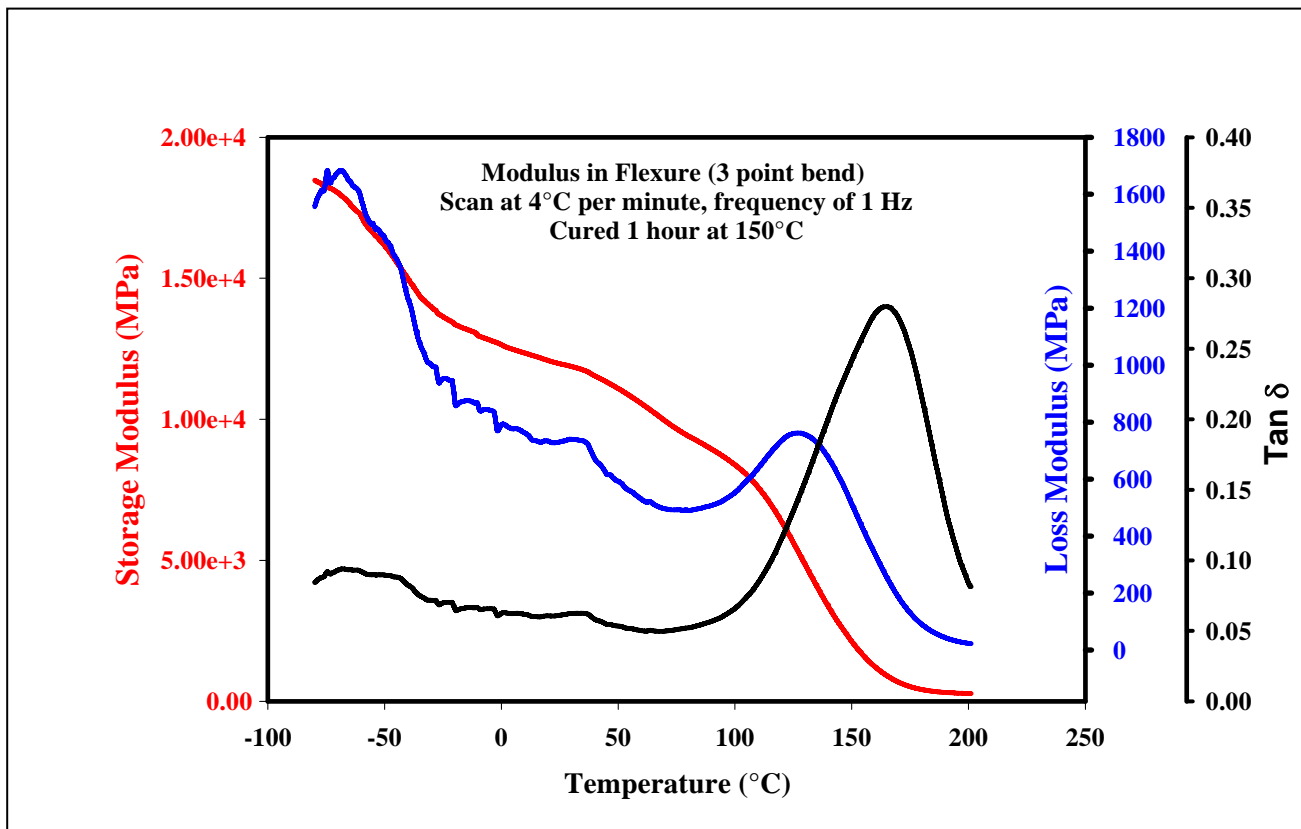
All values reported above are typical values from the recommended cure, and are reported as a means of reference. Individual testing should be done to determine actual results, tested at specific conditions. Data should not be used for material specification purposes.

Rev 111907PLC

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DMA Scans



Modulus Data

Property	Temperature			
	-80°C	-40°C	25°C	100°C
Storage Modulus, MPa	18500	15000	12000	8400
Loss Modulus MPa	1550	1250	730	550
Tan δ	0.084	0.083	0.061	0.066

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