



Adhesive Films and Preforms

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TF E2313F ELECTRICALLY CONDUCTIVE FILM

Description:

TechFilm E2313F is a high performance, electrically conductive, B-staged film adhesive developed for higher temperature applications. It features a relatively low coefficient of thermal expansion, a high glass transition temperature and good adhesion to various substrates. It also features good chemical, and thermal degradation resistance. TechFilm E2313F will cure at temperatures above 160°C.

Shelf Life:

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

Cure Schedules:

Cure Schedule	15 minutes at 150°C plus 30 minutes at 200°C
Alternate Cure Schedules	15 minutes at 160°C plus 20 minutes at 200°C 60 minutes at 180°C

Cured Properties:

<u>Property</u>	<u>Method</u>	<u>Value Obtained</u>
Color	Visual	Silver
Specific Gravity	ASTMD 790	3.6
Volume Resistivity at 25°C, Ohm-cm	TFTEST004A	2.0×10^{-3}
Lap Shear Strength to Aluminum at 25°C, psi	ASTMD 1002	1500
Glass Transition Temperature, °C	DMA	>180
Alpha 1 (below Tg), $\times 10^{-6}/^{\circ}\text{C}$	ASTME 831	55
Alpha 2 (Above Tg), $\times 10^{-6}/^{\circ}\text{C}$	ASTME 831	340
Space Simulated Outgassing, Total Mass Loss (TML), %	ASTM E595	0.190
Space Simulated Outgassing, Collected Volatiles (CVCM), %	ASTM E595	0.020
Space Simulated Outgassing, Water Vapor Recovered (WVR), %	ASTM E595	0.134

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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