



Adhesive Films and Preforms

TF E2214F ELECTRICALLY CONDUCTIVE FILM

Description:

TechFilm E2214F is a high performance electrically conductive B-staged film adhesive specially formulated for bonding to gold or gold plated substrates. TechFilm E2214F is especially suited for EMI/RF grounding applications.

Advantages and Applications:

TechFilm E2214F will cure at temperatures above 120°C. It features good chemical, heat, and moisture resistance.

Shelf Life:

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

Cure Schedules:

Cure Schedule	60 minutes at 150°C
Alternate Cure Schedules	30 minutes at 160°C
	240 minutes at 130°C

Cured Properties:

<u>Property</u>	<u>Method</u>	<u>Value Obtained</u>
Color	Visual	Silver
Specific Gravity	ASTMD 792	3.8
Volume Resistivity at 25°C, Ohm-cm	TFTEST004C	1.0×10^{-4}
Volume Resistivity at 25°C, Ohm-cm after 1000 hr at 150°C	TFTEST004C	0.7×10^{-4}
Lap Shear Strength to Gold at 25°C, psi	ASTM D1002	1700
Lap Shear Strength to Nickel at 25°C, psi	ASTM D1002	1700
Lap Shear Strength to Aluminum at 25°C, psi	ASTM D1002	2150
Glass Transition Temperature (inflection), °C	ASTM E1356	106
Thermal Conductivity, W/m-°K	ASTM E1461	1.3
Thermal diffusivity, thickness = 1.0 mm, cm ² /s-°K	ASTM E1461	0.0055
Specific Heat Capacity, J/g-°K	ASTM E1461	0.56
Alpha 1 (below Tg), x 10 ⁻⁶ /°C	ASTM E831	57
Alpha 2 (above Tg), x 10 ⁻⁶ /°C	ASTM E831	347
Weight Loss at 150°C, TGA, 20°C/min, N ₂ , %	ASTM D3850	0.21
at 200°C	and MIL-STD-883	0.23
at 300°C	Section 3.8.5.1	0.42

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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<u>Property</u>	<u>Method</u>	<u>Value Obtained</u>
Space Simulated Outgassing, Total Mass Loss (TML), %	ASTM E595	0.228
Space Simulated Outgassing, Collected Volatiles (CVCM), %	ASTM E595	0.031
Space Simulated Outgassing, Water Vapor Recovered (WVR), %	ASTM E595	0.080
Total Ionic Conductance after 72 hour water boil, μ mhos/cm	TFTEST007	15
pH at 25°C after 72 hour water boil	TFTEST010	7.3
Ionics, IC, after 72 hour water boil, ppm	ASTM D4327	
Chloride		100
Potassium		10
Sodium		35
Fluoride		< 5
Ammonium		50
Other		< 5

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**Zur Beachtung:**

Vorstehende Angaben können nur allgemeine Hinweise sein. Bei den aufgeführten Eigenschaften und Leistungsmerkmalen handelt es sich um circa-Werte, diese sind nicht Teil der Produktspezifikation. Wegen der außerhalb unseres Einflusses liegenden Verarbeitungs- und Anwendungsbedingungen und der Vielzahl unterschiedlicher Materialien empfehlen wir, in jedem Fall zunächst ausreichende Eigenversuche durchzuführen. Eine Haftung für konkrete Anwendungsergebnisse kann daher aus den Angaben und Hinweisen in diesem Merkblatt nicht abgeleitet werden.

Mit Erscheinen dieser Ausgabe verlieren alle vorhergehenden technischen Merkblätter Ihre Gültigkeit. Sicherheitsrelevante Daten können dem Sicherheitsdatenblatt entnommen werden.

Änderungen vorbehalten / Stand: 08/2009