

TF E2713F

ELECTRICALLY CONDUCTIVE FILM

TECHNICAL DATA

April, 2012

Product Description

TechFilm E2713F is a high performance electrically conductive B-staged film adhesive specially formulated for bonding to gold or gold plated substrates. TechFilm E2713F is especially suited for EMI/RF grounding applications. This product will cure at temperatures above 90C and features good chemical, heat, and moisture resistance.

APPLICATIONS	FEATURES	RECOMMENDED SUBSTRATES
<ul style="list-style-type: none"> EMI/RF grounding 	<ul style="list-style-type: none"> Electrically conductive B-staged film Chemical, heat, moisture resistant 	<ul style="list-style-type: none"> Gold Gold plated substrates

CURED PROPERTIES*		
Property	Value	Test Method
Color	Silver	Visual
Specific Gravity	3.8	ASTM D792
Glass Transition Temperature, C	107 (inflection)	ASTM E1356
Thermal Conductivity, W/m-K	1.3	Estimated
Volume Resistivity @25C, Ohm-cm	1.0 x 10 ^{^(-4)}	TFTEST004C
Volume Resistivity @25C, Ohm-cm	0.7 x 10 ^{^(-4)}	TFTEST004C (after 1000hr @ 150C)
Linear Coefficient of Thermal Expansion, x 10 ^{^(-6)} /C	Alpha 1 (below Tg): 60	ASTM E831
	Alpha 2 (above Tg): 350	ASTM E831
Weight Loss, TGA, 20C/min, N ₂ , %	@ 200C: 0.13	ASTM D3850, MIL-STD-883 Section 3.8.5.1
	@ 250C: 0.18	
	@ 300C: 0.26	
Total Ionic Conductance after 52hr water boil, umhos/cm	16	TFTEST007
pH @ 25C after 52hr water boil, ppm	5	TFTEST010

TENSILE SHEAR STRENGTH*		
Property	Value	Test Method
to Gold @ 25C, psi	1900	ASTM D1002
to Nickel @ 25C, psi	2710	ASTM D1002
to Aluminum @ 25C, psi	1900	ASTM D1002
to Aluminum @ 25C, psi (cured 180 min @ 100C)	1700	ASTM D1002
to 3/16" thick 101 Copper @ 25C, psi	3000	ASTM D1002
to 3/16" thick 260 Brass alloy @ 25C, psi	2500	ASTM D1002

CURE SCHEDULE*		
Property	Value	Test Method
Cure Time @ 165C, min	15	Typical Cure Schedule
Cure Time @ 150C, min	30	Alternate Cure Schedule
Cure Time @ 110C, min	120	Alternate Cure Schedule
Cure Time @ 100C, min	180	Alternate Cure Schedule

Storage: Store in dry conditions, out of sunlight and in tightly sealed containers.
Shelf Life: Three days @ 20C One month @ -10C Three months @ -20C One year @ -40C

Revision Number: 2 Date: 11-April-2012

Resin Designs, LLC 11 State Street Woburn, MA 01810 www.resindesigns.com P 781-935-3133 F 781-935-3144

Resin Designs, LLC makes no express or implied warranties or merchantability, fitness or otherwise with respect to this product. In addition, while the information contained herein is believed to be reliable, no warranty is express or implied regarding the accuracy of the results to be obtained from the use thereof. The properties given are typical values and are not intended for use in preparing specifications. User should make their own test to determine the suitability of this product for their own purposes.