Resin Designs, LLC

TECHFILM PRODUCT LINE
Adhesive Films and Preforms

T2381F

THERMALLY CONDUCTIVE FILM

TECHNICAL DATA — June, 2010

Product Description

TechFilm T2381F is a high performance, thermally conductive\electrically insulating, B-staged film adhesive. It is specially formulated for high temperature applications.

APPLICATIONS	FEATURES	RECOMMENDED SUBSTRATES
• All purpose bonding	• Chemical, heat, moisture resistant • B-staged film	• Aluminum

CURED PROPERTIES*		
Property	**Value**	**Test Method**
Color	Grey	Visual
Specific Gravity	2.1	ASTMD 790
Specific Heat Capacity, J/g-K	1.06	ASTM E1461
Glass Transition Temperature (inflection), C	87/205	ASTM E1356
Thermal Conductivity, W/M-K	1.2	ASTM E1461
Volume Resistivity @25C, Ohm-cm	>2.0 x10^{14}	ASTM D257
Weight Loss, TGA, 20C/min, N_2, %	@ 150C: 0.37	ASTM D3850 and MIL-STD-883 Section 3.8.5.1
	@ 200C: 0.39	
	@ 300C: 0.53	

TENSILE SHEAR STRENGTH*		
Property	**Value**	**Test Method**
to Aluminum @ 25C, psi	2000	ASTM D1002

CURE SCHEDULE*		
Property	**Value**	**Test Method**
Cure Time @ 180°C, min	60	Typical Cure Schedule

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

Revision Number: 1-New Date: 03 June, 2010

Resin Designs, LLC 11 State Street Woburn, MA 01801 www.resindesigns.com P 781-935-3133 F 781-935-3144

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CHEMICAL RESISTANCE TABLE*		
Solvent	**Weight Gain (+) Loss (-) after 24hrs @ 25C, (%)**	**Weight Gain (+) Loss (-) after 48hrs @ 50C, (%)**
Water/antifreeze	0.6	2.2
Transmission fluid	6	2.2
Antifreeze	1.2	8.3
Salt Water, 1.4M	1.4	0.7
Tap Water	0.7	0.9
Deionized Water	0.8	1
Ferric Nitrate/Water, pH2	0.8	0.9
Sodium Hydroxide / Water, pH12	0.8	0.9
Solution of 1 M Methanol, 1M Sulfuric Acid in Water	0.7	1.4
N-Methyl-2-pyrrolidone	0.4	0.9
Acetone	0.3	1.3
Isopropyl Alcohol	-0.1	0.2
Alconox Water, Saturated solution	0.9	2.5
10 to 15 psi Steam, @ >100C	1.4*	_____

*All samples were 0.005 to 0.007 inches thick, 1 inch wide and 3 inches long. A modified ASTM D570 testing procedure was used. Due to the thin samples, used adsorption numbers may be artificially inflated when compared to industrial standards for measuring chemical resistance.

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