

I2202F

ELECTRICALLY INSULATIVE FILM

TECHNICAL DATA

January, 2011

Product Description

TechFilm I2202F is a high performance B-staged film adhesive. It features relatively high flow with good wetting properties, fairly high glass transition temperature and good adhesion to gold and other hard to bond metals. It also features good chemical, heat, and moisture resistance. TechFilm I2202F will cure at temperatures above 115C.

APPLICATIONS	FEATURES	RECOMMENDED SUBSTRATES
<ul style="list-style-type: none"> • General Purpose Adhesive • Electronics Board laminate 	<ul style="list-style-type: none"> • Electrically insulative • B-staged film • Chemical, heat, moisture resistant • High glass transition temperature 	<ul style="list-style-type: none"> • Gold • Hard to bond substrates

CURED PROPERTIES*		
Property	Value	Test Method
Color	Amber	Visual
Specific Gravity	1.2	ASTM D790
Glass Transition Temperature, C	118	ASTM E1356
Linear Coefficient of Thermal Expansion, $\times 10^{(-6)}/C$	Alpha 1 (below Tg): 87	ASTM E831
	Alpha 2 (above Tg): 450	ASTM E831
Volume Resistivity @25C, Ohm-cm	$>2 \times 10^{15}$	ASTM D257

TENSILE SHEAR STRENGTH*		
Property	Value	Test Method
to Aluminum @ 25C, psi	4500	ASTM D1002
to Nickel @ 25C, psi	3600	ASTM D1002
to Gold @ 25C, psi	4200	ASTM D1002
to ULTEM @ 25C, psi	560	ASTM D1002*
to 101 Copper @ 25C, psi	5400	ASTM D1002*
to 260 Brass @ 25C, psi	5950	ASTM D1002*

* Tested using 0.25" thick substrates

CURE SCHEDULE*		
Property	Value	Test Method
Cure Time @ 150C, min	30	Typical Cure Schedule
Cure Time @ 130C, min	90	Alternate Cure Schedule
Cure Time @ 160C, min	20	Alternate Cure Schedule
Cure Time @ 125C, min	120	Alternate Cure Schedule
Cure Time @ 115C, min	210	Alternate Cure Schedule

Storage: Store in dry conditions, out of sunlight and in tightly sealed containers.

Shelf Life: Two weeks @ 20C Two months @ 10C Three months @ -10C One year @ -40C

Revision Number: 2 Date: 05 January, 2011

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CHEMICAL RESISTANCE TABLE *		
Solvent	Weight Gain (+) Loss (-) after 24hrs @ 25C, (%)	Weight Gain (+) Loss (-) after 48hrs @ 50C, (%)
Water/antifreeze	1.5	2.4
Transmission fluid	1.1	1.4
Antifreeze	0.7	1.4
Salt Water, 1.4M	1.8	2.8
Tap Water	2.3	3
Deionized Water	1.9	3.1
Ferric Nitrate/Water, pH2	2.2	2.9
Sodium Hydroxide / Water, pH12	2.2	2.8
Solution of 1 M Methanol, 1M Sulfuric Acid in Water	7.4	3.1
N-Methyl-2-pyrrolidone	Not Recommended	Not Recommended
Acetone	24.8	22.7
Isopropyl Alcohol	0.1	14.9
Alconox Water, Saturated solution	2.1	2.6
10 to 15 psi Steam, @ >100C	2.5	_____

*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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