FR406N

No-Flo® and Lo-Flo® Specialty Prepreg

Tg 170°C Td 300°C Dk 4.3 Df 0.025

IPC-4101 /21 /24 /26 UL - File Number E41625

Isola offers a FR406N family of no-flow and low-flow prepregs consisting of proprietary resin systems specifically formulated for optimal performance in bonding applications requiring minimal resin flow and consistency in lamination.

PRODUCT FEATURES

Industry Recognition

- UL File Number: E41625
- RoHS Compliant

Processing Advantages

- Machinable by steel rule die or punch
- Consistent dielectric spacing
- Complete encapsulation of non-planar surfaces
- Cure and form bond at low temperatures
- Allows for lamination at non-uniform pressures

No-flow Prepreg

- Adhesion to wide range of materials
- Flex films – (Mylar®, Kapton®, etc.)
- Treated or untreated copper
- Plated metals (tin, solder, nickel, etc.)
- Conventional laminate surfaces

PRODUCT AVAILABILITY

Standard Material Offering: Laminate
Copper Foil Type
Copper Weight
Standard Material Offering: Prepreg

- Roll or panel form
- Tooling of prepreg panels

Glass Fabric Availability

- E-glass

FR406 No-Flo and FR406 Lo-Flo® products bring the fabricator specific thermal characteristics appropriate for use in heat sink bonding, die cavity board (direct chip attachment) and multilayer rigid-flex applications.

PRODUCT ATTRIBUTES

TYPICAL MARKET APPLICATIONS

ORDERING INFORMATION:

Contact your local sales representative or contact info@isola-group.com for further information.

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Typical Values Table

Property		Typical Value	Units	Test Method
			Metric (English)	IPC-TM-650 (or as noted)
Pressed Thickness	A. 106 B. 1080	0.043 ±0.0008 (1.7 ±0.3) 0.069 ±0.0008 (2.7 ±0.3)	mm (mil)	—
Resin Content	A. 106 B. 1080	65 ±1.5	%	—
Resin Flow Testing	A. 106 B. 1080	R&R	—	2.3.17
Modified Circle Flow	A. 106 B. 1080	0.050-0.120	—	—
Glass Transition Temperature (Tg) by DSC		170	°C	2.4.25C
Cure Temperature Recommended for Full Cure		185	°C	—
Min. for Functional Bonding		165	°C	—
Z-Axis CTE	Post-Tg	75	ppm/°C	2.4.24C
X/Y-Axis CTE	Pre-Tg	17/20	ppm/°C	2.4.24C
Thermal Conductivity		.30	W/m·K	ASTM E1952
Thermal Stress 10 sec @ 288ºC (550.4ºF)	A. Unetched B. Etched	Pass	Pass Visual	2.4.13.1
Electric Strength (Laminate & laminated prepreg)		70 (1750)	kV/mm (V/mil)	2.5.6.2A
Peel Strength	Standard profile copper >>> After thermal stress	1.75 (10.0)	N/mm (lb/inch)	2.4.8C
Flammability (Laminate & laminated prepreg)		V-0	Rating	UL 94

NOTES

Revisions:
A: Initial release - 4/17
B: Added SI units to Electrical Strength and Peel Strength - 3/22