Legacy Materials

Data Sheet

Tg 170°C
Td 300°C
Dk 4.3
Df 0.025

IPC-4101 - / 21 / 24 / 26

UL - File Number E41625

Last Updated April 18, 2019
Revision No: A

FR406N

FR406 No-Flo and FR406 Lo-Flo® Specialty Prepreg

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.

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

Legacy Materials , No / Low Flow Prepreg

Typical Market Applications

Aerospace & Defense

ORDERING INFORMATION:

Contact your local sales representative or visit www.isola-group.com for further information.

Isola Group
3100 West Ray Road
Suite 301
Chandler, AZ 85226
Phone: 480-893-6527
Fax: 480-893-1409
info@isola-group.com

Isola Asia Pacific (Hong Kong) Ltd.
Unit 3512 - 3522, 35/F
No. 1 Hung To Road, Kwun Tong,
Kowloon, Hong Kong
Phone: 852-2418-1318
Fax: 852-2418-1533
info.hkg@isola-group.com

Isola GmbH
Isola Strasse 2
D-52348 Düren,
Germany
Phone: 49-2421-8080
Fax: 49-2421-808164
info-dur@isola-group.com

Product Features

- Industry Recognition
  - RoHS Compliant
- Performance Attributes
- 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

FR406N Typical Values

Last Updated Apr 18, 2019

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		370	°C	
Min. for Functional Bonding		325	°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/mK	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)		1750	kV/mm (V/mil)	2.5.6.2A
Peel Strength	Standard profile copper >>> After thermal stress	10.0	N/mm (lb/inch)	2.4.8C
Flammability (Laminate & laminated prepreg)		V-0	Rating	UL 94

The data, while believed to be accurate and based on analytical methods considered to be reliable, is for information purposes only. Any sales of these products will be governed by the terms and conditions of the agreement under which they are sold.

https://www.isola-group.com/products/all-printed-circuit-materials/fr406n/

NOTE

Visit our site http://www.isola-group.com for more details.