No Flow

PCL-FRP-370HR

Data Sheet

Tg 180, Td 340
Dk 4.04, Df 0.0210
/21 /24 /26 /98 /99 /101 /126

PCL-FRP-370HR
No Flow Prepreg

The **PCL-FRP-370HR** family of no flow prepregs consisting of proprietary resin system specifically formulated for optimal performance in bonding applications requiring minimal resin flow and consistency in lamination.

PCL-FRP-370HR no flow prepreg can be used to replace **FR406N** materials for lead free assembly applications. PCL-FRP 370HR no flow prepreg is engineered to perform in no flow designs and applications the same as FR406N.

PCL-FRP-370HR products offer specific thermal and expansion characteristics appropriate for use in heat sink bonding, die cavity board (direct chip attachment) and multilayer rigid-flex applications.

www.isola-group.com/products/PCL-FRP-370HR

Features

- High Thermal Performance
  - Tg: 180°C (DSC)
  - Td: 340°C (TGA @ 5% wt loss)
- Low CTE for Reliability
- T260: 60 minutes
- T288: 30 minutes
- RoHS Compliant
- Superior Processing
  - Closest to conventional FR-4 processing
- Prepreg Standard Availability
  - Roll or panel form
  - Tooling of prepreg panels available
- Glass Fabric Availability
  - Standard E-glass
- Minimal Uniform Resin Flow
  - Complete encapsulation and embedment of non-planar surfaces
  - Consistent dielectric spacing
- Adhesion to wide range of material
  - Flex films (Mylar, Kapton etc.)
  - Treated or untreated copper
  - Plated metals (tin, solder, nickel)
  - Conventional laminate surface
- Industry Approvals
  - IPC-4101C /21 /24 /26 /98 /99 /101 /126
  - UL – File Number E41625
  - Qualified to UL's MCIL Program

ORDERING INFORMATION:

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

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PCL-FRP-370HR Specifications

Property		Typical Values			
		Typical Value	Specification	Units	Test Method
				Metric (English)	IPC-TM-650 (or as noted)
Pressed Thickness	**106** **1080**	0.050 (1.97) 0.075 (2.95)	0.050±0.003 (1.97±0.13) 0.075±0.003 (2.95±0.13)	mm (mil)	–
Resin Content	**106** **1080**	71 65	71 ± 2 65 ± 2	%	–
Modified Circle Flow	**106** **1080**	0.7 (27.6) 0.8 (31.5)	0.4-1.6 (15.8-63) 0.4-1.6 (15.8-63)	mm (mil)	QM-QPV-192 Rev. 2
Glass Transition Temperature (Tg)		180	–	ºC	2.4.25
Cure Temperature Recommended for Full Cure		188	–	ºC	–
Min. for Functional Bonding		163	–	ºC	–
CTE, Z-axis		45	Ambient to Tg	ppm/K	2.4.24
CTE, X-, Y-axes		13/14	Ambient to Tg	ppm/K	2.4.24
Thermal Conductivity		0.40	–	W/mK	ASTM D5930
Dielectric Strength		53 (1350)	–	V/mil	D-48/50
Dk, Permittivity @ 71% resin (Prepreg as laminated)	A. @ 100 MHz B. @ 500 MHz C. @ 1 GHz D. @ 2 GHz	3.89 3.84 3.81 3.79	5.4 – – –	–	2.5.5.9 2.5.5.9 2.5.5.9 Bereskin Stripline
Df, Loss Tangent @ 71% resin (Prepreg as laminated)	A. @ 100 MHz B. @ 500 MHz C. @ 1 GHz D. @ 2 GHz	0.0181 0.0210 0.0220 0.0240	0.035 – – –	–	2.5.5.9 2.5.5.9 2.5.5.9 Bereskin Stripline
Dk, Permittivity (65% resin) (Prepreg as laminated)	A. @ 100 MHz B. @ 500 MHz C. @ 1 GHz D. @ 2 GHz	3.99 3.94 3.91 3.88	5.4 – – –	–	2.5.5.9 2.5.5.9 2.5.5.9 Bereskin Stripline
Df, Loss Tangent (65% resin) (Prepreg as laminated)	A. @ 100 MHz B. @ 500 MHz C. @ 1 GHz D. @ 2 GHz	0.0172 0.0195 0.0220 0.0230	0.035 – – –	–	2.5.5.9 2.5.5.9 2.5.5.9 Bereskin Stripline
Peel Strength	1 oz. copper	1.23 (7.0)	After Thermal Stress	N/mm (lbs/inch)	–
Flammability		94 V-0	–	Rating	UL Test

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.

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