

VT-47PP NF/LF

UL Approval: E214381 Version: B1

No Flow & Low Flow Prepreg

General Information

A generation of phenolic cured Low and No Flow products using Ventec's VT-47 resin technology with optimized resin rheology designed to enhance bond strength, specifically designed for lead free assembly processes. It has good bonding and thermal performance in heat sink bonding and rigid-flex board applications, and offers controlled flow ranges and constancy through the lamination process.

- > High Tg & High Td
- > Lead Free Compatible
- > IPC-4101E /97 /98 /99 /101 /126

Storage Condition & Shelf Life

		Prepreg	
Storage Condition	Temperature	< 23°C [73°F]	< 5°C [41°F]
	Relative humidity	< 55%	/
Shelf Life		3 months	6 months

The prepreg exceeding shelf life should be retested.

Availability

Product	Type	Glass Type	Resin Content	Flow Range (mil)	(mm)	Pressed Thickness (mil)	(mm)
VT-47 PP Lead Free Tg 170°C	106 NF	106	68%	10~50	0.25~1.25	1.8	0.046
	1080 NF	1080	60%	10~50	0.25~1.25	2.7	0.069
	106 LF	106	72%	60~120	1.5~3	2.0	0.051
	1080 LF	1080	65%	60~120	1.5~3	3.0	0.076

* Measured by micrometer "NF" ---- No Flow PP, "LF" ---- Low Flow PP

1) Press Temperature ---- 171°C

2) 3plys per pressing

3) Press Pressure ---- 200psi Built per IPC-TM-650 2.3.17.2

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Properties Sheet of Pressed No Flow Prepreg

Test Item		Test Method (IPC-TM-650)	Unit	VT-47
Tg	TMA	2.4.24	°C	170
Td	TGA	ASTM D3850	°C	360
Electric Strength		2.5.6.2	KV/mm	54
Peel Strength with 1oz Cu		2.4.8	Lb/in	9-10
Peel strength with CVL		2.4.8	Lb/in	6
Moisture Absorption	D24 / 23	2.6.21	%	0.10
	After PCT	1atm., 121°C, 1hour	%	0.12
X,Y-axis CTE	30~125°C	2.4.24	ppm/°C	12~15
Z-axis CTE	Before Tg	2.4.24	ppm/°C	70
	After Tg			300
Thermal Stress	Solder dip 288°C	2.4.13.1	Second	>300
Breakdown Voltage	D48/50+ D0.5/23	2.5.6	KV	>60
Arc Resistance	D48/50+ D0.5/23	2.5.1	Second	120
DK (RC60% at 1GHz)	C24/23/50	2.5.5.9	—	3.9
DF (RC60% at 1GHz)	C24/23/50	2.5.5.9	—	0.017
Flammability	As Received	UL94	Rating	V-0

All test data provided are typical values and not intended to be specification values.

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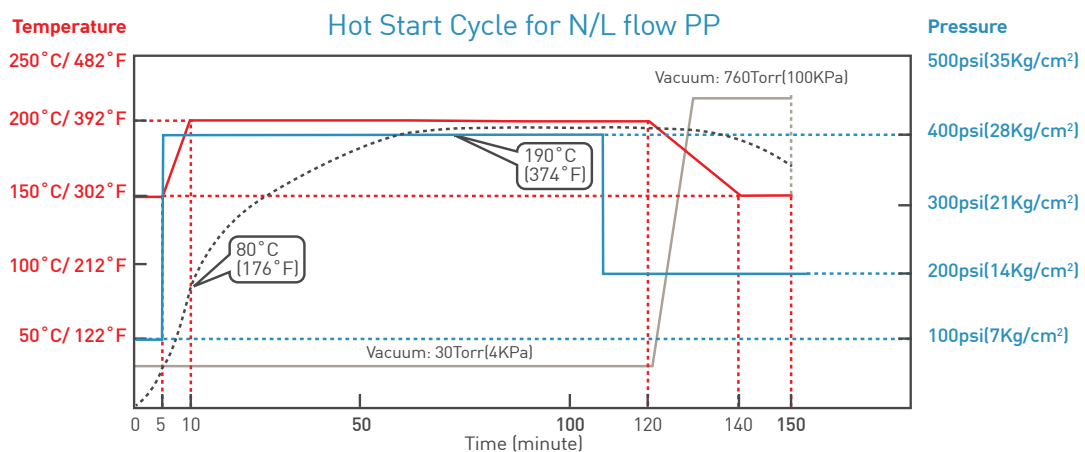
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Press Condition

	VT-47PP
Heating rate of materials	3.0-5.0 °C/min (5~10 °F/min)
Cure Temperature	≥185 °C
Cure Time	>60min
Vacuum should be continued until over 140 °C (284 °F) [Material Temperature]	
Pressure on materials: Start with 100psi, Full pressure: 250~450psi	
Cold Press: Keep Plate @ Room Temperature by water; Pressure: 100psi; Dwell Time: 60minutes	

Contact Ventec technical service to discuss the specific condition.



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