ROGERS CORPORATION

Data Sheet

2929 Bondply Data Sheet

2929 bondply is an unreinforced, hydrocarbon based thin film adhesive system intended for use in high performance, high reliability multi-layer constructions. A low dielectric constant (2.9) and loss tangent (<0.003) at microwave frequencies makes it ideal for bonding multi-layer boards (MLB's) made using PTFE composite materials such as RT/duroid® 6000, RO4000® and RO3000® series laminates. The proprietary cross-linking resin system makes this thin film adhesive system compatible with sequential bond processing while controlled flow characteristics offer blind via fill capability and potentially predictable cutback ratios for designs requiring blind cavities.

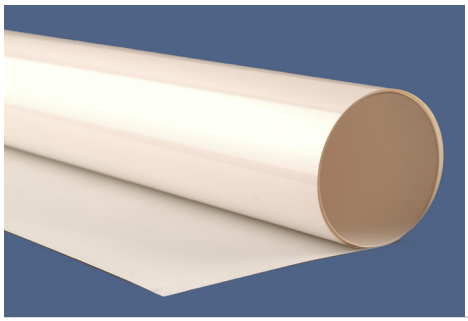
2929 bondply is compatible with traditional flat press and autoclave bonding. The film is currently available in 0.0015", 0.002" and 0.003" sheet thicknesses (0.038mm, 0.051mm, and 0.076mm). Individual sheets can be stacked to yield thicker adhesive layers. The unreinforced thin film can be tack bonded to inner-layers to ease simultaneous machining of cut-outs through core and adhesive layers. An easy-to-release carrier film protects the adhesive layer from contamination during the machining and MLB booking processes.

Features and Benefits:

- Low Dielectric constant and loss tangent
- Ideal for multi-layer bonding
- Compatible with traditional processing methods
- Compatible with a broad range of material types including PTFE composites
- Reliable through sequential bonding
- Can be tack bonded to inner-layer surfaces prior to machining cut-outs
- Excellent blind via fill capability
- Predictable control of post-bond thickness

Typical applications:

- Radar and Sensors
- Point-to-point Microwave
- Base Station Antennas
- Power Amplifiers
- Phased Array Radar
- RF Components
- Patch Antennas
- Power Backplanes



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Property	Typical Value[1] 2929 Bondply	Direction	Units	Condition	Test Method
Dielectric Constant, ε_r Process	2.94 ± 0.05	Z		10 GHz/23°C	IPC-TM-650 2.5.5.5.1
Dissipation Factor	0.003	Z		10 GHz/23°C	IPC-TM-650, 2.5.5.5
Thermal Coefficient of Dielectric Constant, ε_r	-6	Z	ppm/°C	-50°C - 150°C	IPC-TM-650, 2.5.5.5
Volume Resistivity	7.4×10^9		MΩ•cm	125C/24 Hours	IPC-TM-650 2.5.17.1
	5.1×10^8			35C/90%RH/96 Hours	
Surface Resistivity	8.2×10^8		MΩ	125C/24 Hours	IPC-TM-650 2.5.17.1
	1.5×10^5			35C/90%RH/96 Hours	
Dielectric Strength	2500	Z	V/mil	23°C/50%RH	IPC-TM-650, 2.5.6.2
Coefficient of Thermal Expansion	50	X	ppm/°C	0-150°C	IPC-TM-650, 2.4.41
	50	Y			
	50	Z			
Thermal Conductivity	0.4	Z	W/m/°K	80°C	ASTM C518
Moisture Absorption	0.1		%	D24/23	ASTM D570
Tg	170		°C	DMA Method	IPC-TM-650 2.4.24
T-288	>30	Z	Min	TMA	
Td	400		°C	TGA 5% WT	ASTM D3850
Specific Gravity	1.5		gm/cm3	23°C	ASTM D792
Copper Peel Strength	5.0	X,Y	pli	½ oz. EDC Post Solder	IPC-TM-650 2.4.8
Flammability	N/A				UL94
Lead-Free Process Compatible	YES				
Outgassing			%		ASTM E-595
TML	0.42				
CVCM	0.02				
WVR	0.03				

NOTES:
[1] Typical values are a representation of an average value for the population of the property. For specification values contact Rogers Corporation.

Standard Thicknesses	Standard Panel Sizes
0.0015" (0.038mm) +/- 10% 0.0020" (0.051mm) +/- 10% 0.0030" (0.076mm) +/- 10%	18"X12" (457mm X 305mm) 18"X24" (457mm X 610mm)
*Contact Customer Service or Sales Engineering to inquire about additional available product configurations	*Additional panel sizes available

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