

## PRODUCT INFORMATION BULLETIN

# FOR LAMINATION OF RIGID-FLEX CIRCUITS



### OVERVIEW

**PACOTHANE® PLUS** is a conformable release film that is specifically engineered for use as a component of the Pacothane Plus System for the production of Flexible Printed Circuits (base stock, coverlay, and rigid-flex). Pacothane® Plus brings standardization and predictability to the flex laminating process and offers tangible process advantages. When used with PacoPads both products combined offer consistent “macro” and “micro” Z-Axis Pressure Distribution throughout the complete lamination lay-up.

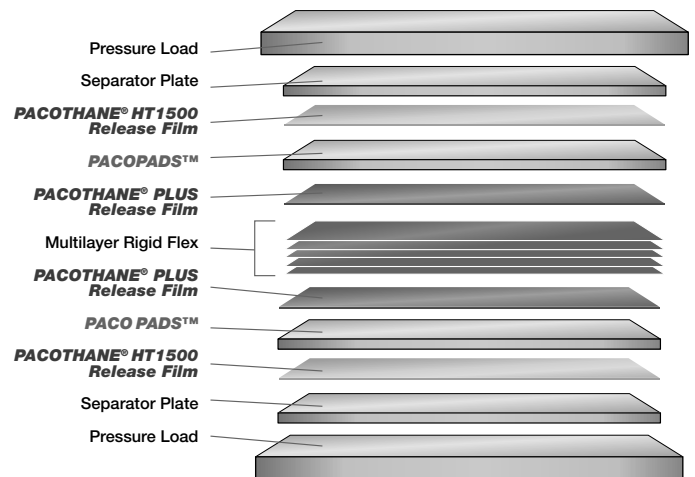
### LAMINATION PROCESS ADVANTAGES

- **Reduces Mechanical Distortion** - PACOTHANE® PLUS “locks in” around the laminate components to minimize distortion due to Heat and Pressure. In conjunction with PACOPADS™, the PACOPLUS System conforms in the Z axis only, eliminating the X-Y axis distortion associated with commodity conformal
- **Control of Adhesive Flow** - PACOTHANE® PLUS effectively dams back acrylic or epoxy adhesive flow into pre-drilled or punched openings, as well as at rigid-flex interfaces
- **Quick Easy Release** - Both sides of PACOTHANE PLUS provide quick, easy, & clean release from all surfaces
- **Reduced Lamination Pressure** - The PACOTHANE® PLUS System, consisting of PACOTHANE® PLUS Conformable Release Sheet and PACOPADS™ Pressure Diffuser Press Pads, discreetly conforms in the Z axis while equally distributing pressure across the panel surface. Due to the superior, macro pressure-equalizing characteristics of PACOPADS™, the same amount of hydraulic force is delivered with a lower nominal Ram Pressure, maximum “Z-Axis” pressure equalization and a more robust conformable make-up system

### FEATURES

- Two-side Releasable
- Extremely low X-Y axis movement
- Smooth Surface Finish with superior Conformal Properties
- Operating temperature to 425°F (218°C) at lower Ram Pressures
- Eliminates Fiber Pattern Transfer to cover layers
- Clean, inert with no out-gassing of contaminants or solvents harmful to Vacuum Systems
- Environmentally friendly with no ozone-depleting Chemicals or Fluorine's. Suitable for incineration or landfill disposal
- Proven worldwide performance since 1986. The Industry Standard for Rigid-Flex Laminations

### RECOMMENDED LAMINATION LAY-UP



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### DESCRIPTION OF STANDARDS

Physical Property	Test Method	Reported Units	Typical Values		
Max. Application Temp.	Q 1025	°F	425°F		
Thickness	Q-3019	MiLs	12±5%		
Density	ASTM	G/CM <sup>3</sup>	1.5		
Heat Shrinkage (Heat= 190°)	Pacothane® Method	MD	<5%		
		TD	<5%		
Vicat Softening Temperature	ASTM E794	°C	240°C		
Appearance	White, Semi-translucent				
Tensile Strength (At yeild point)	MD	YP	ASTM D882	Kg/cm <sup>2</sup>	2520
		Elong	ASTM D882	%	120
	TD	YP	ASTM D882	Kg/cm <sup>2</sup>	2702
		Elong	ASTM D882	%	130

**PACOTHANE® PLUS** is available in custom-made sheet sizes, tooled to customer specifications. The complete line of Pacothane Technologies products is available from leading local Distributors Worldwide who offer “Just in Time” delivery from locally-available stocks.

### Also from Pacothane® Technologies:

#### RELEASE PRODUCTS



#### PRESS PADS



#### CONFORMABLES



#### CONTAMINATION CONTROL



#### ULTRA HIGH TEMPERATURE



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