

PRODUCT INFORMATION BULLETIN

FOR LAMINATION OF COVERLAYS AND FLEXIBLE CIRCUITS



OVERVIEW

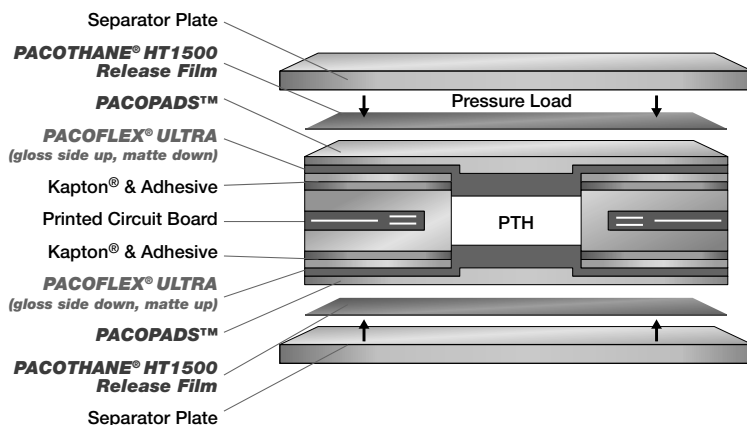
PACOFLEX™ ULTRA is the ultimate conformable release film for scrap-free applications for the lamination of cover layers and flexible circuits. It is fine-tuned to reduce excessive “squeeze-out” of adhesive into pad areas and will also effectively block adhesive or resin flow into any other unwanted areas.

When exposed to heat and pressure, PACOFLEX™ ULTRA softens into the PACOPAD™ and together they become dynamic “z-axis conformable drivers” which provide superior sidewall conformance with the circuitized base laminate and other intricate flex part topographies.

PACOFLEX™ ULTRA is a two-ply polymeric structure, engineered to a 0.006” (156 μ) thickness. The conformable, quick and easy releasable, “functional” side of the product [see Figure 1] has a matte appearance and is opaque and should be placed adjacent to the Circuit. The other side, which is placed against a PACOPAD™ conformable driver sheet, is easily distinguishable from its opposite side because it is glossy and non-releasable.

PACOFLEX™ ULTRA used together with PACOPADS™ Pressure Diffuser Pads, delivers unmatched Z-Axis pressure equalization. These two companion products provide simultaneous micro & macro conformance and stabilize all the flexible components permitting reductions in Hydraulic force by ≥30%. Pacopads compensate for uneven internal pressure imposed upon the work.

RECOMMENDED LAMINATION LAY-UP



LAMINATION PROCESS ADVANTAGES

- **Elimination of Entrapped Air Between Cover-Layer and Circuitized Base-** PACOFLEX™ ULTRA delivers discreet hydraulic force to reliably drive the Cover-Layer into complete sidewall conformance with the circuitized base laminate
- **Finite Control of Adhesive Flow-** Due to the optimized, robust smooth surface and superior conformability, PACOFLEX™ ULTRA dams back acrylic and epoxy adhesives from flowing into Cover-Layer clearance areas
- **Quick, Easy, Contaminate-Free Release-** The opaque, non-contaminating, releasable side of PACOFLEX™ ULTRA is placed adjacent to the surface of the Cover Layer Circuit; leaving the glossy side to be positioned adjacent to the PACOPADS™ side in the make-up. This combination offers maximum “Z-Axis” pressure equalization and a more robust conformable make-up system
- **Reduces Mechanical Distortion and Defects-** PACOFLEX™ ULTRA “locks-in” around the flexible components to minimize distortion due to Heat and Pressure. Our “ULTRA” Film conforms closely to the part’s surface without excessive flow-out from the sheet. Because of the reduced pressure regime possible with our conformable “system”, Deformed Circuits, Crushed Pads, and Glossy Pressure Spots are eliminated, resulting in repeatable Pad Registration



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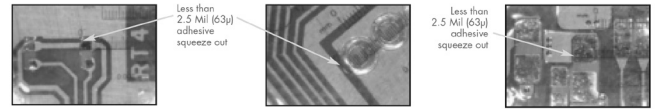
FEATURES

- “Matte” side releasable! No out-gassing or contaminant transfer that will affect solder adhesion
- Engineered conformance layer that prevents uncontrolled “squeeze-out” and meets Mil and IPC Specs
- “Ultra smooth” surface finish for superior adhesive flow control
- Extremely low X-Y axis movement
- Clean, inert with no out-gassing of contaminants or solvents harmful to vacuum systems
- Operating temperature to 425°F (218°C) with reduced ram pressures
- Environmentally friendly with no ozone-depleting chemicals or flourines. Suitable for incinerator or landfill disposal!
- Proven line of Pacothane® products sold worldwide since 1985

AVAILABILITY

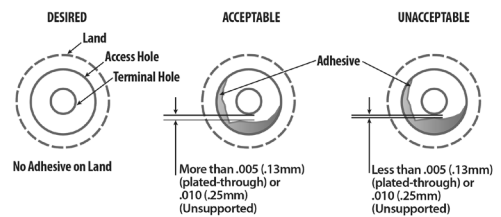
PACOFLEX™ ULTRA is available in custom-made sheet sizes, tooled to customer specifications. The complete line of Pacothane Technologies products is available from leading local Distributors Worldwide who offer “Just in Time” delivery from locally-available stocks.

Construction: 0.002" [50 µ] Kapton® Polyimide Film & 0.002" [50 µ] Adhesive.



Scales: Each line is 5 Mil (12.5µ)

MIL-P-50884E Specification Drawing



Also from Pacothane® Technologies:

RELEASE PRODUCTS



PRESS PADS



CONFORMABLES



CONTAMINATION CONTROL



ULTRA HIGH TEMPERATURE



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