

Flexcon® PharmCal®

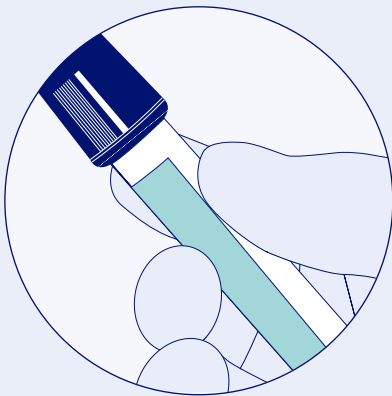
# Pharmaceutical Pressure-Sensitive Labeling Solutions



# Flexcon is Your Trusted Partner

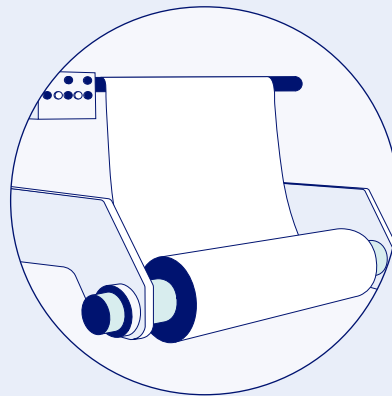
## Proven Performance

- Solutions tailored to the harshest drug storage conditions
- Products have been thoroughly tested on drug packaging surfaces under actual service conditions



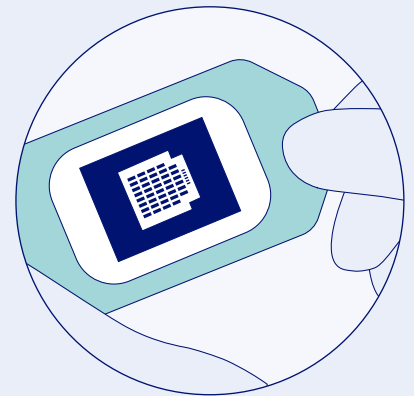
## Quality Assurance

- Stringent requirements on raw material quality and performance criteria
- Certificate of Conformance (CoC) to verify product performance upon request
- Change Management Process ensures consistent material performance



## Technical Expertise

- Supplying the healthcare industry for over 35 years
- Dedicated support from recommendation to qualification to scale-up



## Consistent Quality

Change management process is designed to ensure consistent material performance.

Stringent requirements



Tight controls on quality and performance with raw material specifications and annual supplier audits

Advanced notification



Material suppliers communicate changes to raw components in advance

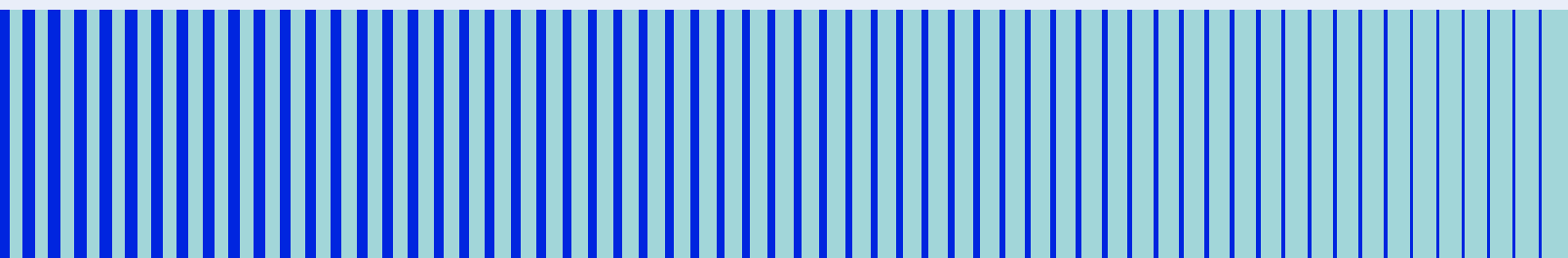
Thorough review



Supplier changes reviewed by R&D, Quality, and Manufacturing teams

Customized test plans

Test plans in place to ensure consistent product performance



# High-Performance Adhesive and Topcoat Technologies



## Exceptional printability

- Reliable topcoats for conventional & digital ink systems to enable cross-platform printability and reduced SKUs
- Chemical & abrasion resistance for long-term readability



## Engineered films

- Conformable, flexible films that contour to a variety of package types
- Dimensional stability for high-speed auto-dispensing labeling applications



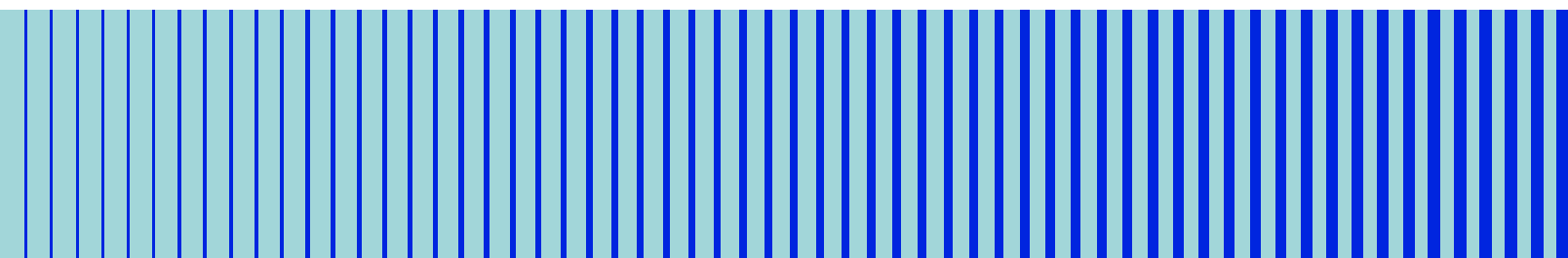
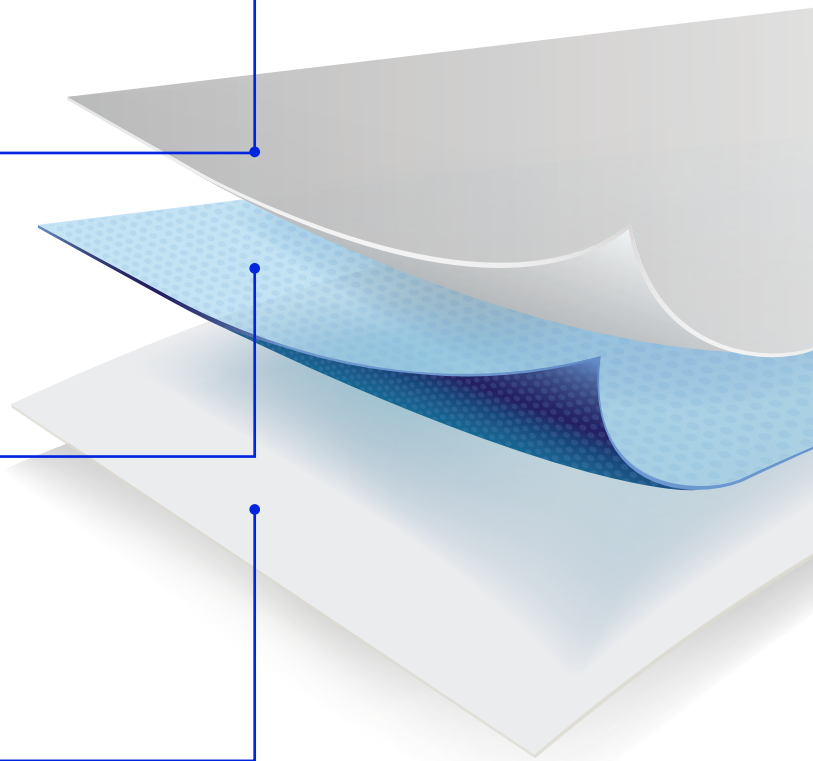
## Robust adhesion

- Adhesives developed specifically for the most challenging and demanding applications
- Durable anchorage to plastic, glass, and coated paperboard surfaces



## Optimized liners

- High tensile strength allows for continuous high-speed processing
- Suitable for high-speed diecutting, matrix stripping, and auto-dispensing



# Applications

- Flexcon's PharmCal® portfolio consists of six unique product families based on end-use application.
- Each product family is comprised of a full range of high-performance materials engineered to meet all your pharmaceutical labeling needs.

## Typical Applications & Product Family

## Flexcon® Recommended Products

### Large Diameter Labeling

Printable substrates for over-the-counter drug labeling

PharmCal® OTC

Pill Containers



PharmCal® OTC 068902  
2.0 mil Clear Polypropylene, General Purpose, Film Liner

PharmCal® OTC 068904  
2.0 mil Clear Polypropylene, General Purpose, Paper Liner

PharmCal® OTC 068903  
2.3 mil White Polypropylene, General Purpose, Film Liner

PharmCal® OTC 068905  
2.3 mil White Polypropylene, General Purpose, Paper Liner

### Cryogenics & Cold Chain

Engineered materials for extreme storage conditions

PharmCal® CryoFlex™

Cryovials



PharmCal® CryoFlex™ 000300  
3.5 mil White Matte Polyethylene, Deep Freeze Permanent, Paper Liner

PharmCal® CryoFlex™ 000302  
2.3 mil White Polypropylene, Deep Freeze Permanent, Paper Liner

PharmCal® CryoFlex™ 000301  
2.0 mil Clear Polypropylene, Deep Freeze Permanent, Paper Liner

### Small Diameter Labeling

High-performance materials for vials, syringes, and ampules

PharmCal® Supreme

Syringes, Vials, and Ampules



PharmCal® Supreme 069045  
1.5 mil Clear Polyester, High-performance, Film Liner

PharmCal® Supreme 000211  
2.0 mil Clear Polypropylene, High-performance with Fluoresce, Film Liner

PharmCal® Supreme 052434  
2.0 mil Clear Polypropylene, High-performance, Film Liner

PharmCal® Supreme 011974  
2.3 mil White Polypropylene, High-performance, Film Liner

PharmCal® Supreme 068639  
2.6 mil White Polypropylene, High-performance, Film Liner

### Conceal

Opaque materials for covering existing labels

PharmCal® Conceal™

Clinical Trials and Overlabeling



PharmCal® Conceal™ 069047  
2.3 mil White Opaque Gloss Polypropylene, High-performance, Paper Liner

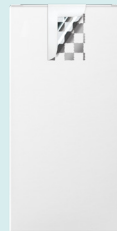
PharmCal® Conceal™ 069048  
2.3 mil White Opaque Matte Polypropylene, High-performance, Paper Liner

### Security & Tamper-Evident

Tamper-evident materials for counterfeit protection

PharmCal® TamperMark™

Pill Containers and Boxes



PharmCal® TamperMark™ 006126  
2.0 mil Clear Polypropylene, Surface Destruct, Film Liner

PharmCal® TamperMark™ 069087  
2.0 mil Clear Diacetate, Film Destruct, Paper Liner

PharmCal® TamperMark™ 069051  
2.0 mil White Polyethylene, Film Destruct, Paper Liner

PharmCal® TamperMark™ 069052  
2.0 mil White Polyester Film, Visible "VOID" Pattern, Paper Liner

PharmCal® TamperMark™ 069053  
1.5 mil Silver Polyester Film, Visible Checkerboard Pattern, Paper Liner

### Blood Bag Labeling

Single-ply or piggyback constructions for asset tracking

PharmCal® BioMark

Blood and Plasma Bags




PharmCal® BioMark 069164  
Piggyback, Removable Poly Liner, Your Film

PharmCal® BioMark 069165  
Piggyback, 3.0 mil White Polypropylene

PharmCal® BioMark 069088  
3.8 mil White Matte Polyethylene, Permanent, Paper Liner

## PharmCal® OTC Printable Substrates for Over-the-Counter Drug Labeling


- Exceptional print surface for high-end graphics
- Flexible, conformable films contour around cylindrical containers
- High-tack and high-peel adhesion to plastic packaging
- Polyester liner offers excellent roll tracking for tight print registration, high-speed matrix stripping, and high-speed auto-dispensing
- Bleached Kraft paper liner is backside printable for registration marks in auto-dispensing applications
- Service temperature range from -40°F to 212°F (-40°C to 100°C)
- Products listed comply with 21 CFR 175.105†, REACH, and RoHS/WEE



	Film		Print			Liner		Process				
	Clear Polypropylene	White Polypropylene	Thermal Transfer Resin or Wax/Resin	Conventional	Narrow-Format UV Inkjet	1.2 mil Clear Polyester	2.5 mil White Kraft Paper	Thermal Printer Label Sensing	High-Speed Auto-Dispensing	High-Speed Matrix Stripping	Good Die Cutting	Exceptional Die Cutting
PharmCal® OTC 068902 2.0 mil Clear Polypropylene, General Purpose, Film Liner	●		●	●	●	●			●	●		●
PharmCal® OTC 068904 2.0 mil Clear Polypropylene, General Purpose, Paper Liner	●		●	●	●		●	●	●	●	●	
PharmCal® OTC 068903 2.3 mil White Polypropylene, General Purpose, Film Liner		●	●	●	●	●			●	●		●
PharmCal® OTC 068905 2.3 mil White Polypropylene, General Purpose, Paper Liner		●	●	●	●		●	●	●	●	●	

## PharmCal® CryoFlex™ Engineered Materials for Extreme Storage Conditions

- High-performance adhesive is engineered to survive extreme temperature cycling
- Enables drug identification after cold temperature storage
- Ideal for cryogenic storage temperatures as low as -112°F (-80°C)
- High adhesion to glass and plastic containers
- Robust topcoat allows smudge proof and abrasion resistant thermal transfer printing
- Flexible white polyolefin ideal for pouch labeling
- Products listed comply with 21 CFR 175.105†, REACH, and RoHS/WEE




	Film			Print			Process			Temp	
	White Matte Polyethylene	Clear Polypropylene	White Polypropylene	Thermal Transfer Resin or Wax/Resin	Conventional	Narrow-Format UV Inkjet	Thermal Printer Label Sensing	High-Speed Auto-Dispensing	Good Die Cutting	-112°F to 176°F (-80°C to 80°C)	-112°F to 212°F (-80°C to 100°C)
PharmCal® CryoFlex™ 000300 3.5 mil White Matte Polyethylene, Deep Freeze Permanent, Paper Liner	●			●	●	●	●	●	●	●	
PharmCal® CryoFlex™ 000302 2.3 mil White Polypropylene, Deep Freeze Permanent, Paper Liner			●	●	●	●	●	●	●		●
PharmCal® CryoFlex™ 000301 2.0 mil Clear Polypropylene, Deep Freeze Permanent, Paper Liner		●		●	●	●	●	●	●		●

†FDA CFR 175.105: Adhesives may be safely used as components of articles intended for use in packaging, transporting, or holding food in accordance with prescribed conditions.

## PharmCal® Supreme High-Performance Materials for Vials, Syringes, and Ampules


- Conformable films contour around tight-radius containers
- High-performance adhesives prevent lifting and flagging
- Smooth print surface provides exceptional fine print readability and barcode scanning
- Clear film options provide optimum clarity for no-label look
- Polyester liner is ideal for labeling in clean room environments
- Sterilization compatible
- Two year storage stability
- Products listed comply with 21 CFR 175.105†, REACH, and RoHS/WEE



	Film			Adhesion			Print			Process				Temp		
	Clear Polypropylene	Clear Polyester	White Polypropylene	Glass	PP: COP, COC	Fluorescing Adhesive	ISO 10993 -5, -10	Thermal Transfer Resin or Wax/Resin	Conventional	Narrow-Format UV Inkjet	High-Speed Auto-Dispensing	High-Speed Matrix Stripping	Exceptional Die Cutting	Excellent On-Press Registration	-40°F to 212°F (-40°C to 100°C)	-40°F to 302°F (-40°C to 150°C)
PharmCal® Supreme 069045 1.5 mil Clear Polyester, High-performance, Film Liner		●		●	●			●	●	●	●	●	●	●		●
PharmCal® Supreme 000211 2.0 mil Clear Polypropylene, High- performance with Fluoresce, Film Liner	●			●	●	●		●	●	●	●	●	●	●	●	
PharmCal® Supreme 052434 2.0 mil Clear Polypropylene, High-performance, Film Liner	●			●	●		●	●	●	●	●	●	●	●	●	
PharmCal® Supreme 011974 2.3 mil White Polypropylene, High-performance, Film Liner			●	●	●		●	●	●	●	●	●	●	●	●	
PharmCal® Supreme 068639 2.6 mil White Polypropylene, High-performance, Film Liner			●	●	●		●	●	●	●	●	●	●	●	●	

## PharmCal® Conceal™ Opaque Materials for Covering Existing Labels

- Metalized film provides high-opacity to hide original identifier on product packaging
- Thermal transfer printable topcoat offered in matte or gloss
- Matte coating accepts pen inking for trial comments
- Biocompatible adhesive mitigates risk of migration through packaging
- High-adhesive performance bonds to tight-radius glass or plastic containers
- Service temperature range from -40°F to 212°F (-40°C to 100°C)
- Products listed comply with 21 CFR 175.105†, REACH, RoHS/WEE, and ISO 10993-5,-10 †




	Film		Print			Process			
	White Matte Polypropylene	White Gloss Polypropylene	Thermal Transfer Resin or Wax / Resin	Conventional	Narrow-Format UV Inkjet	Accepts Pen and Marker	Thermal Printer Label Sensing	High-Speed Auto-Dispensing	Good Die Cutting
PharmCal® Conceal™ 069047 2.3 mil White Opaque Gloss Polypropylene, High-performance, Paper Liner		●	●	●	●		●	●	●
PharmCal® Conceal™ 069048 2.3 mil White Opaque Matte Polypropylene, High-performance, Paper Liner	●		●	●	●	●	●	●	●

†ISO 10993-5,-10: Tests for in vitro cytotoxicity, irritation, and sensitization

## PharmCal® TamperMark™ Tamper-Evident Materials for Counterfeit Protection


- Tamper-evident materials ensure product authenticity through the supply chain
- Material leaves "VOID" or checkerboard pattern on package surface
- Destructible films prevent relabeling onto counterfeit package
- High-adhesive bond onto plastic containers, cardboard and packaging materials
- Permanent adhesives suitable for closure seals on paper packaging
- Ideal for FDA 21CFR 211.132|| and EU FMD§ regulations for tamper-proof labeling and packaging



	Function			Film				Print			Process	
	Destructs/Prevents Relabeling	Tears Cardboard Surface	Leaves Visible Evidence	Polypropylene	Diacetate	Polyethylene	Polyester	Thermal Transfer Resin or Wax/Resin	Conventional	Narrow-Format UV Inkjet	Thermal Printer Label Sensing	Quilon®* Prevents Pick-Off
PharmCal® TamperMark™ 006126 2.0 mil Clear Polypropylene, Surface Destruct, Film Liner		●		●				●	●	●		
PharmCal® TamperMark™ 069087 2.0 mil Clear Diacetate, Film Destruct, Paper Liner	●	●			●				●		●	●
PharmCal® TamperMark™ 069051 2.0 mil White Polyethylene, Film Destruct, Paper Liner	●	●				●		●	●	●	●	●
PharmCal® TamperMark™ 069052 2.0 mil White Polyester, Visible "VOID" Pattern, Paper Liner			●				●	●	●	●	●	●
PharmCal® TamperMark™ 069053 1.5 mil Silver Polyester, Visible Checkerboard Pattern, Paper Liner			●				●	●	●	●	●	●

## PharmCal® BioMark Single-ply or Piggyback Constructions for Asset Tracking

- Single-ply constructions allow label to be printed and applied directly on package
- Versatile piggyback constructions are offered with either a top layer printable white polypropylene, or adhesive layer to allow customer to apply their own film
- Passes centrifuge process
- Top surface liner can be stripped to expose adhesive surface for secondary label application
- Engineered for extreme temperature cycling and water submersion
- Service temperature range -40°F to 176°F (-40°C to 80°C)

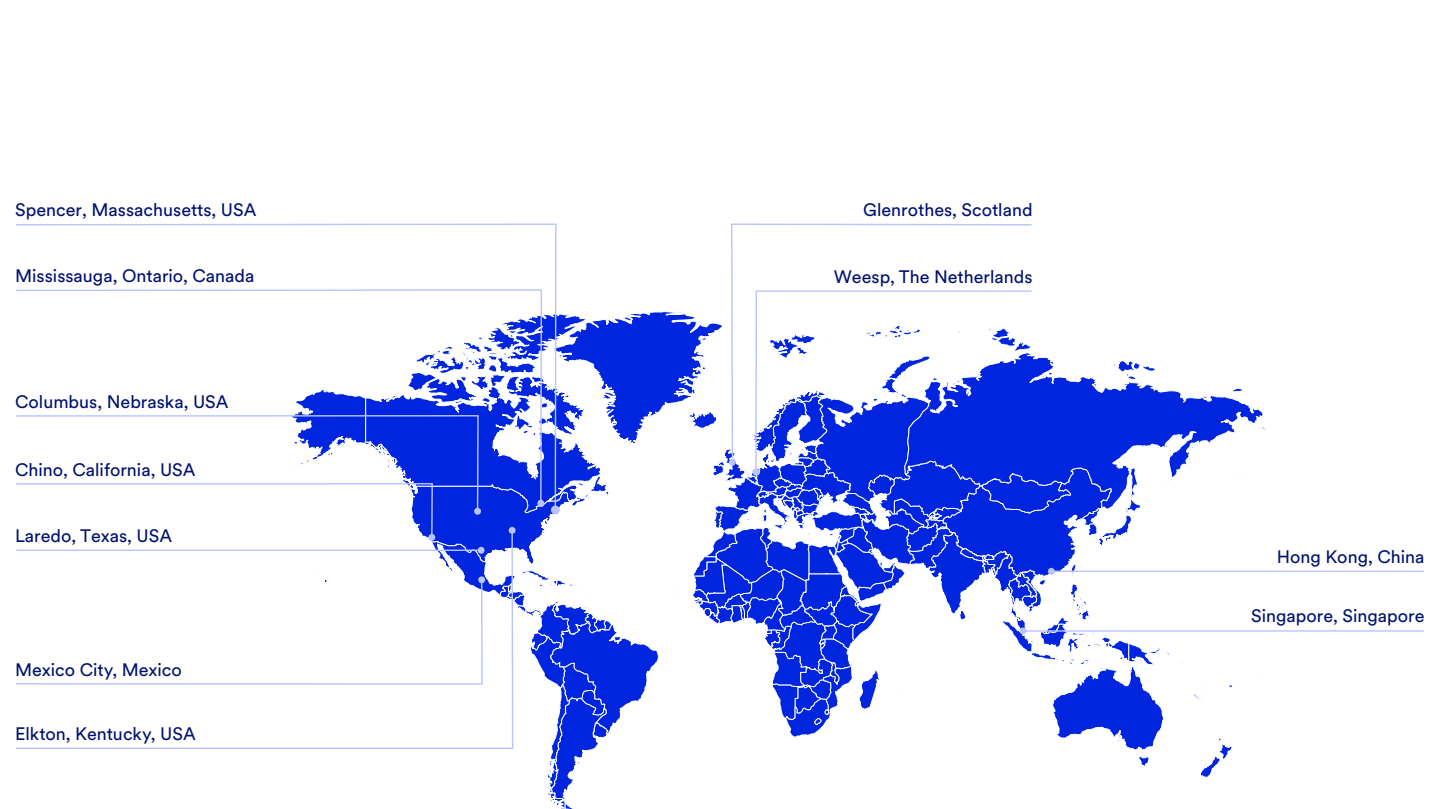
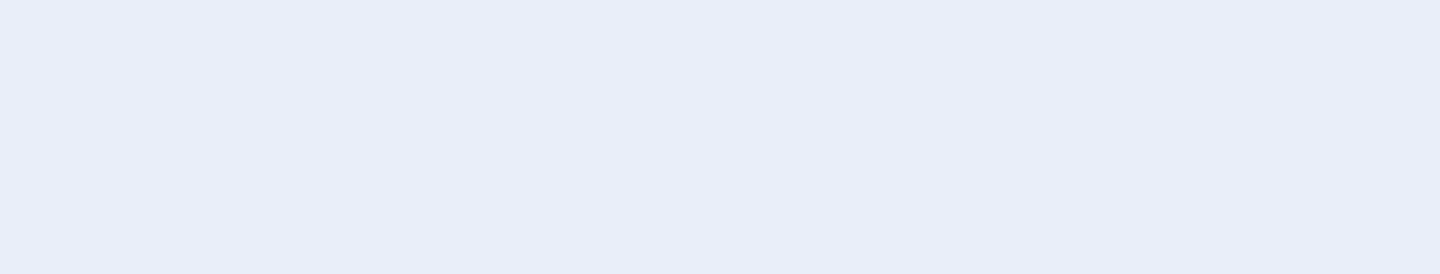


	Construction		Film		Adhesion		Print	
	Piggyback	Single-Ply	White Polyolefin	Your Film	Adhesive Base for Your Film	ISO10993-5,-10 (Container Side)	Thermal Transfer Resin or Wax/Resin	Conventional
PharmCal® BioMark 069164 Piggyback, Removable Poly Liner, Your Film	●			●	●	●		
PharmCal® BioMark 069165 Piggyback, 3.0 Mil White Polypropylene	●		●			●	●	●
PharmCal® BioMark 069088 3.8 mil White Matte Polyethylene, Permanent, Paper Liner		●	●				●	●

# Supporting Businesses Globally

In 1956, Myles McDonough pioneered the first pressure-sensitive film product in a Spencer garage, breaking away from the industry's focus on high-volume commodity products. His vision was to meet the unique needs of innovators seeking new applications for pressure-sensitive films.

Today, over 65 years later, Flexcon continues this legacy, serving diverse industries such as packaging, electronics, transportation, and healthcare. Flexcon is a trusted manufacturing partner, known for turning innovative ideas into reality. For over 35 years, Flexcon has been supplying the healthcare industry with adhesives, tapes, films, and coating technologies. Our products support applications in patient care, pharmaceuticals, diagnostics, and consumer wellness.



Flexcon is a global company with manufacturing facilities in North America, Europe, and Asia. Our products are used in a wide range of industries, including packaging, electronics, transportation, and healthcare. We are committed to providing high-quality products and excellent customer service to our global customers.



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