

Pharmaceutical Labeling Solutions

Engineered Label Materials for
Pharmaceutical Applications



Who We Are

For 70 years, Flexcon has been at the forefront of pressure-sensitive material innovation—helping customers across diverse industries achieve their goals.

Pharmaceutical labeling materials require higher levels of scrutiny and performance validation than conventional packaging labels. Flexcon’s PharmCal® labeling solutions are purpose-built for pharmaceutical applications including: small diameter ampules, vials, and syringes, over the counter, cover-up labeling, blood bag labeling, tamper-evident labels, and cryogenic/cold chain.

Our products allow converters to simplify material selection while meeting the rigorous demands of pharmaceutical manufacturing. Combining advanced materials with seven decades of application expertise, PharmCal® delivers reliable identification, traceability, and product integrity from production through patient use.

Proven Performance

- Engineered for the harshest storage conditions
- Tested directly on medical packaging under real-world conditions

Quality Assurance

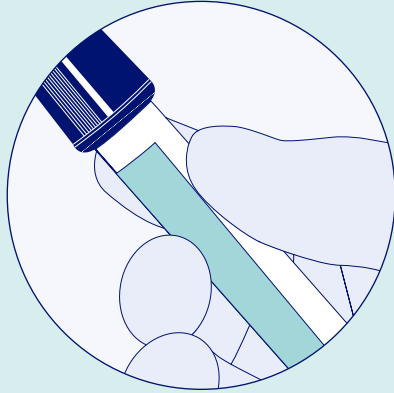
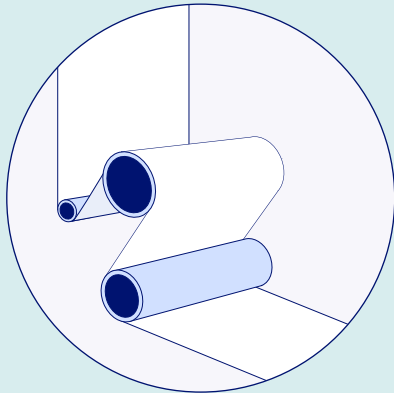
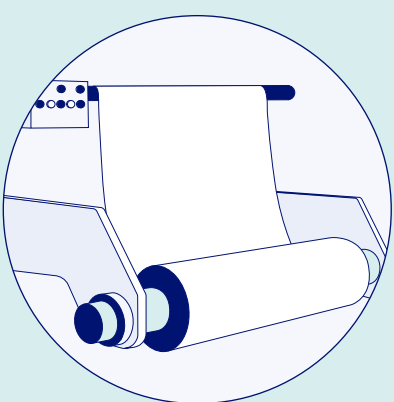
- Strict raw material standards and performance benchmarks
- Certificate of Conformance (CoC) available upon request
- Tailored test plans verify consistent product performance over time

Technical Expertise

- Over 35 years serving the healthcare industry
- End-to-end support from product selection to scale-up

Reliable Consistency

- Tight quality controls and annual supplier audits
- 6-month advance notification of raw material changes
- Cross-functional review by R&D, quality, and manufacturing teams



Precision in Layers

Each component of Flexcon label construction plays a role in performance.



Exceptional Printability

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



Engineered Films

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



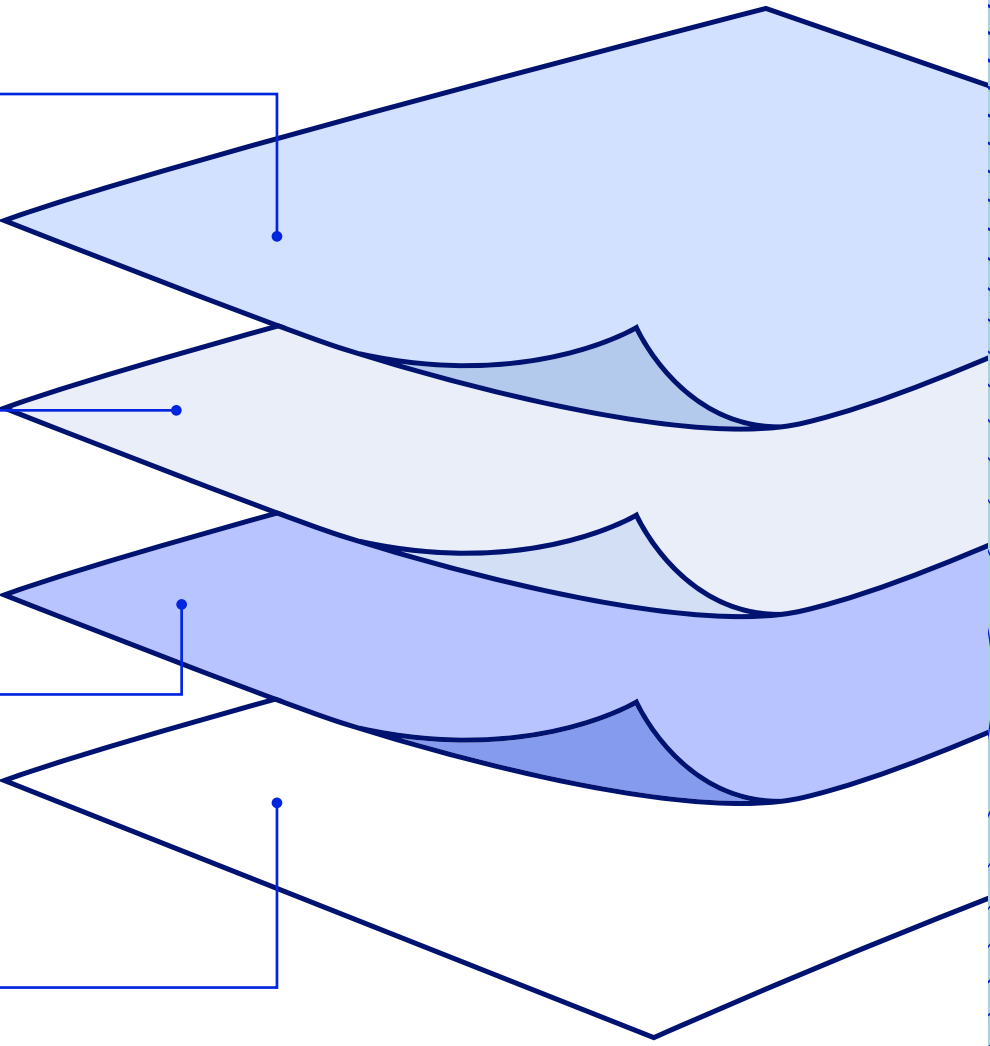
Robust Adhesion

- Adhesives developed 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



Flexcon Service Programs

We’ve streamlined our ordering programs to give you more control and faster access to our solutions.

Flexcon® FlexChoice™

A fixed-length, any-width product selected from standard options.

- Choose from predefined configurations
- Leave the off-cuts with us

Quick-Ship

Wide-web rolls finished to your specifications.

- Minimum order: full web width

Custom Products

Custom options available to fit specific applications.

Contact your sales rep to develop a product that best suits your needs.

For more information, visit flexcon.com/capabilities/delivery

Change Management

Consistency in pharmaceutical labeling is critical to maintaining a qualified, validated process. The finished label may look the same, but any change could affect how it performs and present compliance violations and patient safety risks.

All Flexcon® PharmCal® products come with a 6-month notification period prior to any changes, giving you time to understand the change and have confidence in your product.

We provide notification of any changes such as

- New adhesive raw material
- Specification updates
- Manufacturing process adjustment
- New production location

This allows your organization the opportunity to understand the changes, evaluate the potential impact, and take appropriate action before implementation.



Full Visibility into Any Label Material Change



Adhesive Guide

These guides provide an overview of our proven adhesive and topcoat solutions, categorized by type and application.

For seven decades, Flexcon’s leadership in adhesive technologies has revolutionized thousands of products across dozens of industries.

Flexcon engineers adhesive technologies that meet the demanding bonding challenges across the variety of materials and environments used in pharmaceutical applications.

Application Substrate Surface Energy			Performance Attributes								Applications	
Low	Med	High	Adhesive	General Purpose	High Performance	Permanent	High Clarity	High-temp Resistance up to 100°C (212°F)	Chemical Resistance	Moisture Resistance	Labels	Tapes
○	○	●	V-32	●	●	●	●	●			●	
○	○	●	V-88		●	●				●	●	●
○	○	●	V-95		●	●		●	●	●	●	●
○	○	●	V-156		●	●		●			●	
○	○		V-176	●		●	●				●	
○	○	●	V-224	●		●			●		●	
○	○	●	V-232	●	●	●	●	●			●	
○	○	●	V-232C	●	●	●		●			●	
○	○	●	V-246	●						●		
○	○	●	V-344		●	●		●	●		●	●
○	○	●	V-449	●	●	●	●	●	●		●	

Topcoat Guide

Superior topcoats enhance ink adhesion, for consistent cross-platform printability. Resilient coating technology provides resistance to abrasion, sterilizing chemicals, extreme temperatures, and moisture, ensuring durable print integrity throughout handling, storage, and transport.



	Conventional								Digital												
	Screen		Flexo		Offset		Letterpress		Thermal Transfer			Inkjet					Preferred Substrates				
	Solvent	UV	Water & Solvent	UV	UV	Oil	UV	Hot Stamp	Resin	Combo (wax/resin)	Wax	Eco-solvent	UV Wide Format	UV Narrow Format	Water	Laser	Xeikon Dry Toner	Polyester	Vinyl	Polypropylene	Polyethylene
Gloss Topcoats																					
TC-716	●	●	●	●	●		●	●	●	●			●	●		○	●	●	●	●	●
TC-332™	○	●	●	●	□	□	●	●	●	●				●		○				●	
TC-679	○	●	●	●	□	□	●	●	●	●				●		○				●	
Matte Topcoat																					
MTC-722	●	●	●	●	●	●	●		●	●	●	□	●	●		●	●	●	●	●	
Specialty Topcoats																					
TC-272			●	●	●		●		●	●										●	
TC-458	○	●	●	●	□	□	●	●	●	●				●		○				●	

Performance by Design

Flexcon® PharmCal® product families deliver targeted, high-performance labeling solutions—engineered for precision, made for every pharmaceutical application.

Small Diameter Labeling

For vials, syringes, and ampules

PharmCal®
Supreme



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Cryogenics & Cold Chain

For plastic and glass vials and tubes

PharmCal®
CryoFlex™



Pages 12 - 13

Blood Bag Labeling

For blood and plasma bags

PharmCal®
BioMark



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Security & Tamper-evident

For pill containers and boxes

PharmCal®
TamperMark™



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Conceal

For covering pre-existing data on pharma packaging

PharmCal®
Conceal™



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General Purpose

Everyday reliability

PharmCal®
OTC



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PharmCal® Supreme

Advanced label solutions for vials, syringes, and ampules

Patient safety starts with accurate, durable labeling. Label lifting on small, curved containers creates problems with production, compliance, and safety.

Exposure to alcohol wipes, moisture, glove handling, and frequent contact can compromise labels, making essential medication information difficult to read at the point of care.

Flexcon® PharmCal® Supreme is engineered to resist smudging and maintain legibility while conforming securely to tight-radius containers without lifting or adhesive failure.

Flexible for Tight-radius Containers

- Wraps smoothly around small, curved containers
- High-performance adhesives prevent lifting and flagging
- Smooth print surface delivers fine detail printability and reliable barcode scanning
- Clear film gives a clean, no-label look
- Polyester liner ideal for labeling in clean room settings
- Sterilization compatible
- Two-year storage stability

Product Construction													Printing Compatibility					
													Conventional			Digital		
FLX#	Quick-Ship	Description	Film	Topcoat	Adhesive	Liner	Color/Finish	MOQ (MSI)	Master Width	Adhesive Type	Service Temperature Range	Minimum Application Temperature	UV	Solvent	Water	TTR	Laser	UV Narrow-Format Inkjet
069045		PharmCal® Supreme 069045	1.5 Mil Polyester	TC-716	V-95	1.5 Mil PET	Clear Gloss	1000	60"	Permanent	-40°C to 150°C	1.7°C	●	●	●	●		●
000211	●	PharmCal® Supreme 000211	2 Mil Polypropylene	TC-332™	V-232C	1.5 Mil PET	Clear Gloss	500	60"	Permanent	-40°C to 100°C	1.7°C	●	●	●	●		●
000212	●	PharmCal® Supreme 000212	2 Mil Polypropylene	TC-332™	V-232	1.5 Mil PET	Clear Gloss	500	60"	Permanent	-40°C to 100°C	1.7°C	●	●	●	●		●
052434		PharmCal® Supreme 052434	2 Mil Polypropylene	TC-332™	V-344	1.5 Mil PET	Clear Gloss	1000	60"	Permanent	-40°C to 100°C	10°C	●	●	●	●		●
011974	●	PharmCal® Supreme 011974	2.3 Mil Polypropylene	TC-332™	V-344	1.5 Mil PET	White Gloss	500	60"	Permanent	-40°C to 100°C	10°C	●	●	●	●		●
068639	●	PharmCal® Supreme 068639	2.6 Mil Polypropylene	TC-272	V-344	1.5 Mil PET	White Gloss	500	60"	Permanent	-40°C to 100°C	10°C	●	●	●	●		●



Cryogenic label substrates for accuracy, consistency and traceability

In cryogenic storage environments, label performance is essential to maintaining identification and traceability through extreme temperature exposure and cycling.

Flexcon® PharmCal® CryoFlex™ materials are engineered for demanding cold-chain and cryogenic applications, ranging from freezer and dry-ice storage to liquid-nitrogen environments, providing reliable adhesion on a variety of substrates.

With options designed to withstand temperatures as low as -196°C (-320.8°F), PharmCal® CryoFlex™ materials combine durable adhesion with films and print surfaces that maintain label integrity and legibility throughout storage, handling, and use.

Engineered for Extreme Storage Conditions

- Reliable adhesion for extreme temperature cycling
- Maintain traceability post-cryogenic storage with a label made for both manual writing and high-resolution printing
- Strong bond to plastic and glass containers
- Reliable from cold storage to cryogenic extremes, withstanding temperatures as low as -196°C (-320.8°F)
- Topcoat resists smudging and scratching when thermal transfer printed
- Meets key safety and environmental standards, 21 CFR 175.105†, REACH, and RoHS/WEEE

Product Construction													Printing Compatibility					
													Conventional			Digital		
FLX#	Quick-Ship	Description	Film	Topcoat	Adhesive	Liner	Color/Finish	MOQ (MSI)	Master Width	Adhesive Type	Service Temperature Range	Minimum Application Temperature	UV	Solvent	Water	TTR	Laser	UV Narrow-Format Inkjet
 070806	●	PharmCal® CryoFlex™ 070806	1.0 Mil Polypropylene	TC-716	V-176	1.2 Mil PET	Clear Matte	500	60"	Permanent	-196°C to 135°C	-196°C	●	●	●	●		●
000300	●	PharmCal® CryoFlex™ 000300	3.5 Mil Polyethylene	PTP	V-32	50# Kraft	White Matte	500	60"	Permanent	-80°C to 100°C	1.7°C	●	●	●	●		●
000302	●	PharmCal® CryoFlex™ 000302	2.3 Mil Polypropylene	TC-679	V-32	50# Kraft	White Gloss	500	60"	Permanent	-80°C to 100°C	1.7°C	●	●	●	●		●
000301	●	PharmCal® CryoFlex™ 000301	2.0 Mil Polypropylene	TC-679	V-32	50# Kraft	Clear Gloss	500	60"	Permanent	-80°C to 100°C	1.7°C	●	●	●	●		●



PharmCal® BioMark

Single-ply and piggyback label materials for blood and plasma tracking

Flexcon® PharmCal® BioMark is a performance-driven labeling solution engineered for blood and plasma bags, where secure adhesion, lasting legibility, and material reliability are essential throughout the product lifecycle.

Available in single-ply and piggyback constructions, PharmCal® BioMark combines flexible film technology with high-performance, emulsion-based biocompatible adhesives designed to withstand the demanding conditions encountered from collection through storage, processing, transport, and use—including extreme temperature cycling, water submersion, and centrifugation.

PharmCal® BioMark materials maintain label integrity, adhesion, and readability from -40°C to 80°C (-40°F to 176°F). Backed by ISEGA certification and comprehensive biocompatibility testing it ensures dependable performance throughout use.

Stays Legible Throughout the Product Lifecycle

- Passes hemolysis, cytotoxicity, and irritation testing
- Single-ply constructions print and apply directly to packaging
- Flexible multi-layer design for custom or printable labels
- Passes centrifuge process
- Peel-away top surface liner allows second label use
- Handles extreme temperature cycling and water submersion
- Certified by ISEGA



Product Construction													Printing Compatibility					
													Conventional			Digital		
FLX#	Quick-Ship	Description	Film	Topcoat	Adhesive	Liner	Color/Finish	MOQ (MSI)	Master Width	Adhesive Type	Service Temperature Range	Minimum Application Temperature	UV	Solvent	Water	TTR	Laser	UV Narrow-Format Inkjet
069088	●	PharmCal® BioMark 069088	3.8 Mil Polyethylene	PTP	V-224	50# Kraft	White Matte	500	60"	Permanent	-40°C to 80°C	0°C	●			●		
069165		PharmCal® BioMark 069165	3.1 Mil Polypropylene		V-224/ V-246	2 Mil PET/ 50# Kraft	Gloss White	1000	60"	Permanent	-40°C to 100°C	10°C	●	●	●	●		

Performance by Design

PharmCal® TamperMark™

Protect product integrity and customer trust with tamper-evident label solutions

In pharmaceutical packaging, maintaining product integrity from production through the point of use is essential. Flexcon® PharmCal® TamperMark™ label materials provide visible, irreversible evidence when a package or label has been opened, removed, or altered—helping protect product authenticity and giving users confidence in package integrity.

The portfolio includes destructible constructions that tear or damage the package surface when removal is attempted, as well as VOID and checkerboard technologies that leave a clear pattern on the label and substrate, helping prevent label reuse and unauthorized relabeling.

Engineered to adhere securely to plastic, cardboard, and other common packaging materials, PharmCal® TamperMark™ solutions combine security functionality with printability and converting performance.

Tamper-evident for Safety

- Built-in tamper-evident features help protect product authenticity revealing visible signs of tampering like VOID or checkerboard patterns, or label destruction
- Film structure designed to destruct by tearing the package upon removal, prevent reuse or relabeling
- Sticks firmly to plastic, cardboard, and other packaging materials
- Supports compliance with key safety and environmental standards, FDA 21 CFR 211.132|| and EU FMD§ regulations for the final packaging system.

Product Construction														Printing Compatibility				
														Conventional			Digital	
FLX#	Quick-Ship	Description	Film	Topcoat	Adhesive	Liner	Color/Finish	MOQ (MSI)	Master Width	Adhesive Type	Service Temperature Range	Minimum Application Temperature	UV	Solvent	Water	TTR	Laser	UV Narrow-Format Inkjet
006126	●	PharmCal® TamperMark™ 006126	2.0 Mil Polypropylene	TC-332™	V-88	1.5 Mil PET	Clear Gloss	500	60"	Permanent	-40°C to 100°C	10°C	●			●		●
069087		PharmCal® TamperMark™ 069087	2.0 Mil Diacetate		V-88	50# Kraft/Q	Clear Gloss	1000	52"	Permanent	-40°C to 93°C	10°C	●	●	●	●		
069051		PharmCal® TamperMark™ 069051	2.0 Mil Polyethylene	TC-716	V-88	50# Kraft/Q	White Gloss	1000	60"	Permanent	-40°C to 80°C	10°C	●	●	●	●		●
069052		PharmCal® TamperMark™ 069052	2.0 Mil Polyester	TC-716	V-156	50# Kraft/Q	White Gloss	1000	60"	Permanent	-40°C to 150°C	0°C	●	●	●	●		●
069053		PharmCal® TamperMark™ 069053	1.5 Mil Polyester	TC-716	V-156	50# Kraft/Q	Silver Gloss	1000	54"	Permanent	-40°C to 150°C	0°C	●	●	●	●		●



PharmCal® Conceal™

Blockout labels to cover existing information for relabeling and clinical trials

In clinical trials, effective concealment helps protect trial integrity by preventing participants and study personnel from seeing information that could reveal treatment identity. Maintaining that concealment supports study integrity by helping reduce potential bias and ensuring treatments remain indistinguishable throughout the trial.

Flexcon® PharmCal® Conceal™ provides reliable label solutions for pharmaceutical applications where existing information needs to be completely covered.

High-opacity films securely conceal underlying labels and markings while adhering firmly to glass and plastic containers. Available in matte and gloss finishes, PharmCal® Conceal™ combines clean appearance, print versatility, and dependable performance for relabeling, clinical trials, and other pharmaceutical applications.

Secure, Reliable Label Concealment

- Covers existing labels with high-opacity film
- Thermal transfer printable topcoat offered in matte or gloss
- Matte coating allows easy pen writing
- Formulated to reduce the risk of migration through packaging
- Sticks firmly to curved glass or plastic
- Wide service temperature range from -40°C to 100°C (-40°F to 212°F)
- Meets key safety and environmental standards, 21 CFR 175.105†, REACH, and RoHS/WEEE

Product Construction													Printing Compatibility					
													Conventional			Digital		
FLX#	Quick-Ship	Description	Film	Topcoat	Adhesive	Liner	Color/Finish	MOQ (MSI)	Master Width	Adhesive Type	Service Temperature Range	Minimum Application Temperature	UV	Solvent	Water	TTR	Laser	UV Narrow-Format Inkjet
069047		PharmCal® Conceal™ 069047	2.3 Mil Polypropylene	TC-332™	V-344	50# Kraft	White Opaque Gloss	1000	60"	Permanent	-40°C to 100°C	10°C	●	●	●	●		●
069048		PharmCal® Conceal™ 069048	2.4 Mil Polypropylene	MTC-722	V-344	50# Kraft	White Opaque Matte	1000	60"	Permanent	-40°C to 100°C	10°C	●	●	●	●	●	●

†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® OTC

Over-the-counter label materials for efficient converting, compliance and visual impact

For over-the-counter pharmaceutical labeling needs, Flexcon® PharmCal® OTC solutions deliver the dependable adhesion, consistent performance, and quality needed to keep critical information securely in place, all with a guaranteed change notification.

Our printable pharmaceutical label substrates made for over-the-counter drug labeling are flexible and conformable to contour around cylindrical containers.

PharmCal® OTC label materials are designed to remain clear and legible while delivering critical FDA-required information, with the durability to withstand handling without peeling or tearing.

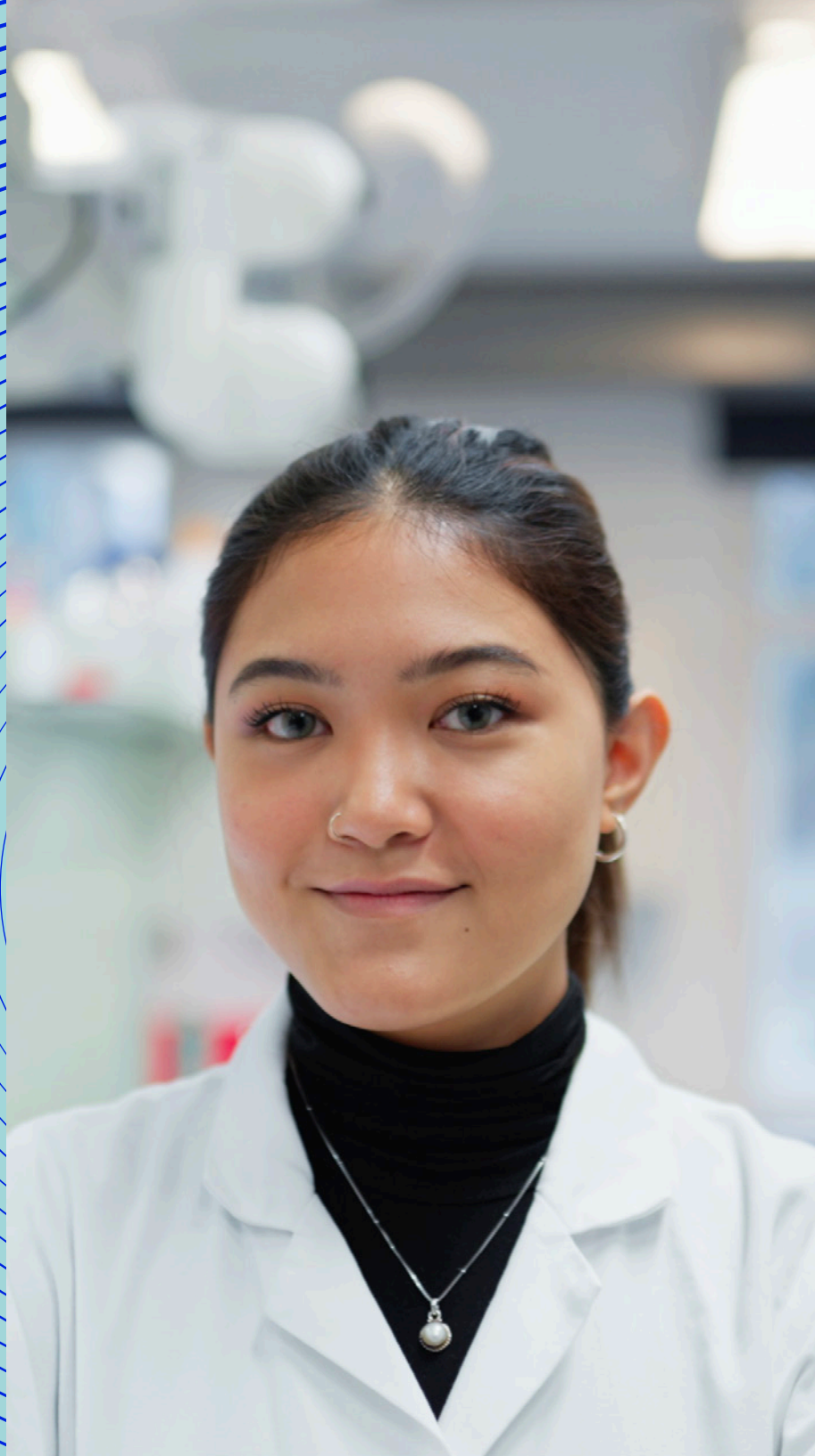
Efficiency, Compliance, and Shelf Impact

- Exceptional print surface for precision printing and vibrant detail
- Flexible, conformable films wrap smoothly around curved containers
- High initial tack and strong peel adhesion on plastic packaging
- Polyester liner offers excellent roll tracking for tight print registration, high-speed matrix stripping, and high-speed auto-dispensing
- Bleached kraft liner allows back-side registration mark printing for accurate auto-dispensing
- Wide service temperature range from -40°C to 100°C (-40°F to 212°F)
- Meets key safety and environmental standards, 21 CFR 175.105†, REACH, and RoHS/WEEE

Product Construction													Printing Compatibility					
													Conventional			Digital		
FLX#	Quick-Ship	Description	Film	Topcoat	Adhesive	Liner	Color/Finish	MOQ (MS)	Master Width	Adhesive Type	Service Temperature Range	Minimum Application Temperature	UV	Solvent	Water	TTR	Laser	UV Narrow-Format Inkjet
068904		PharmCal® OTC 068904	2.0 Mil Polypropylene	TC-458	V-449	40# Kraft	Clear Gloss	1000	60"	Permanent	-40°C to 150°C	1.7°C	●	●	●	●		●
068903		PharmCal® OTC 068903	2.3 Mil Polypropylene	TC-458	V-449	1.2 Mil PET	White Gloss	1000	60"	Permanent	-40°C to 100°C	1.7°C	●	●	●	●		●
068905		PharmCal® OTC 068905	2.3 Mil Polypropylene	TC-458	V-449	40# Kraft	White Gloss	1000	60"	Permanent	-40°C to 100°C	1.7°C	●	●	●	●		●

†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.





Leading in Research

As a manufacturer, Flexcon evaluates the entire lifecycle of our products: the materials we source and how they perform in real-world conditions.

In 2025, Flexcon published a comprehensive white paper on the pharmaceutical labeling landscape, drawing on first-hand insights from leading CDMOs and pharmaceutical companies across the U.S. and Europe.

The report provides an in-depth analysis of the pharmaceutical packaging ecosystem, outlining the risks associated with poor-quality labeling and the key considerations for effective label selection.

It examines the evolving challenges and opportunities shaping the industry, with particular focus on how label quality influences patient safety, regulatory compliance, and brand reputation throughout the value chain.

Scan here to access the research report.



Supporting Innovation Across Healthcare Applications

Discover our additional healthcare solutions beyond pharmaceutical labeling:



To learn more visit flexcon.com/markets/healthcare

Wearables

Flexcon® DermaFlex™
Skin-friendly adhesives and flexible substrates for device attachment to the body.



Diagnostics and Therapeutics

Flexcon® Omni-Wave™
Conductive adhesive transfer tapes for use in electrodes and sensors.



Medical Device Labeling

Flexcon® MedFlex® Plus
Durable labeling products for use with FDA Class I and II medical devices used outside the body.

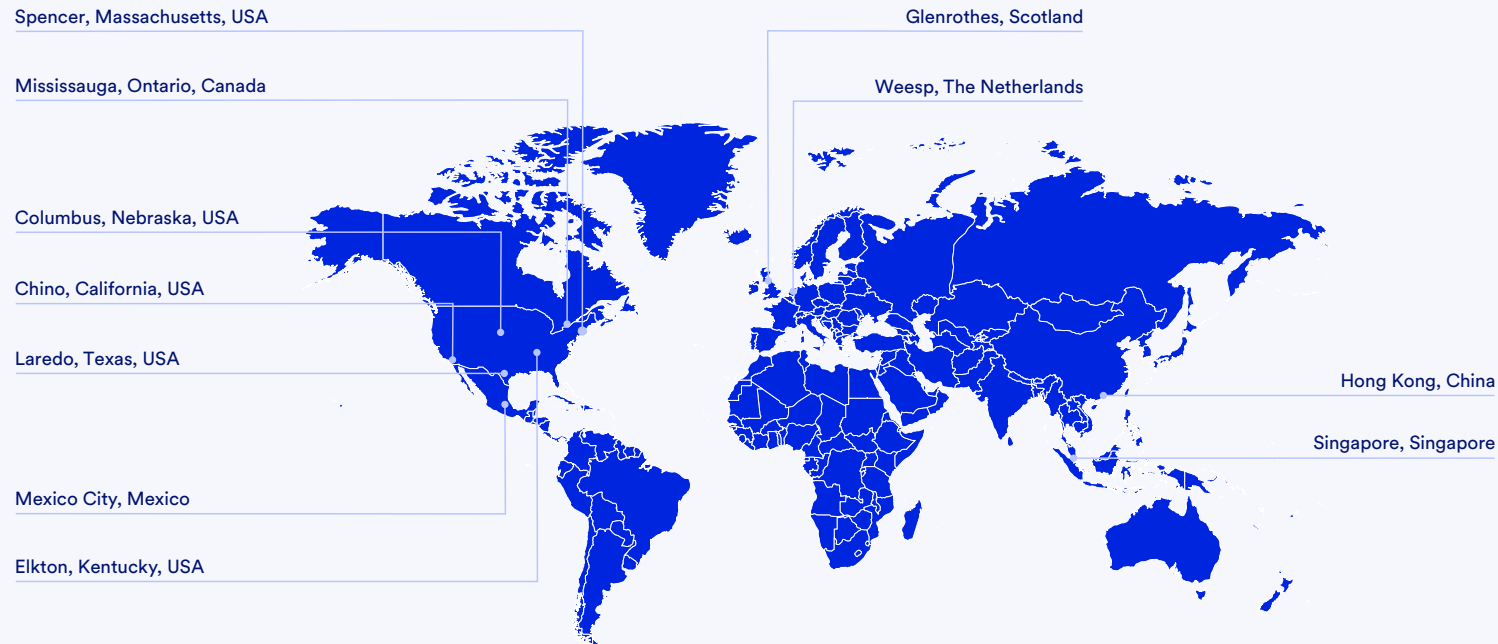


Supporting Businesses Globally

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, 70 years later, Flexcon continues this legacy, serving diverse industries such as packaging, electronics, durables, 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 wearables, diagnostics, and labeling.



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Product Performance and Suitability: Descriptive information, performance data, and recommendations for Flexcon products are guides and not specifications. Providing this information is to assist you and does not constitute a warranty of any kind by Flexcon.

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