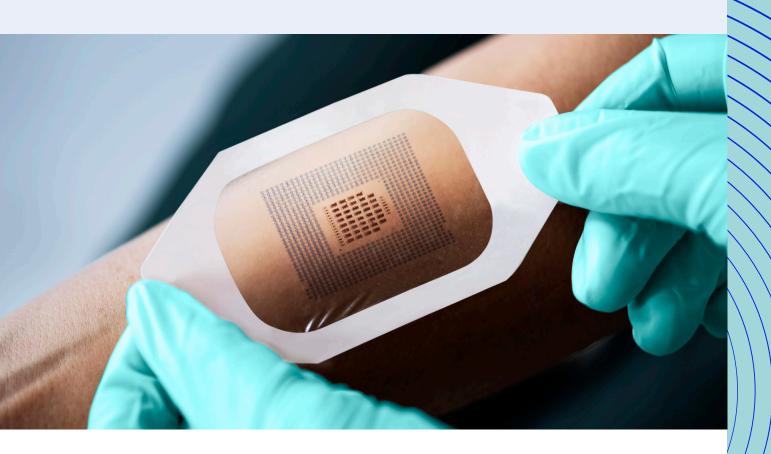
# Healthcare Solutions

New possibilities in wearables, diagnostics, and labeling







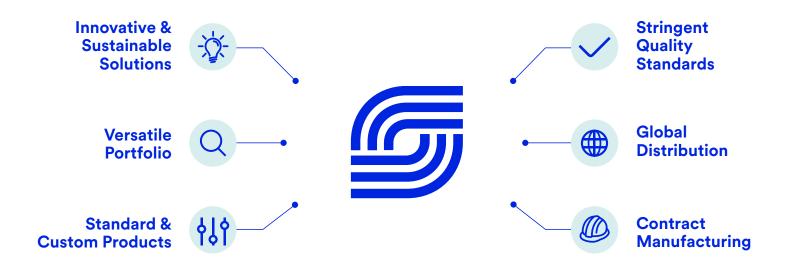


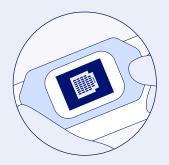




# What Flexcon Healthcare Can Do for You

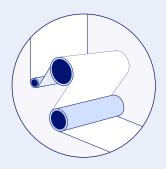
Over 65 years of experience as a purpose-driven material science company means that Converters and Medical Device Companies in the healthcare industry can count on Flexcon to deliver comprehensive solutions, innovation, and engineering expertise. Our specialty is in manufacturing and coating films and adhesives, where customers take advantage of our product development expertise to create the ideal solution, and our flexibility to start small and scale up as needs change.





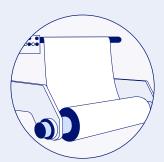
### Rapid Prototyping

- Product Design
- Lab Prototyping
- Custom Testing
- Formulation
- Chemistry Modification & Custom Mixing



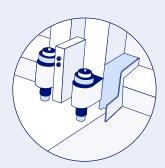
### Coating

- Adhesive Coating
- Topcoating
- ISO Class 7 Cleanroom
- Adhesive Thickness Range from 0.5 mil to 4 mil
- Single and Double-sided Coating
- Zone Coating



### Laminating

- Multilayer Laminations
- Heat Laminations
- Cold Laminations



### Surface Modification

- Micro-embossing
- Perforation
- Brushing
- Nano-Imprint Lithography

# **Customers We Support**

Whether you are a converter, medical device company, or small start up, we are here to help you commercialize healthcare technologies. We recognize you are looking for a partner who is flexible, forward thinking, and innovative. Your goal is our goal, to deliver a solution that fits a need.

Flexcon provides you with support for your application every step of the way, always striving for better patient outcomes.



### Converter

- Wide range of product offerings
- Sample availability
- Technical support
- · Certificate of analysis
- Flexible order quantities



# Start-Up and Large Medical Device Companies

- R&D design consultation and collaboration
- Performance solutions and data
- Prototyping for scale-up
- ISO 9001:2015 Certified with TUV Rheinland of North America
- Flexible order quantities
- Sample availability



### **End User/Patient**

- Safe medical components
- Consistent performance



# **Healthcare Segments**



# Wearables

Skin-friendly adhesives and flexible substrates



# Diagnostics & Therapeutics

Conductive adhesive transfer tapes



# **Case Studies**

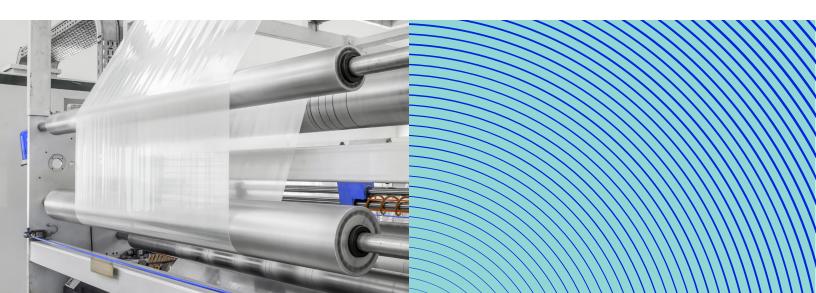


# Pharmaceutical Labeling

Drug packaging Security



# **Medical Device Labeling**



# Wearables

### Flexcon® DermaFlex™ Skin-friendly adhesives and flexible substrates

Skin-friendly materials are intended for device attachment to the body. DermaFlex™ adhesives have been tested for biocompatibility (skin irritation, sensitization, and cytotoxicity) by Flexcon's adhesive suppliers using ISO-10993 or similar test methods\*.

Choose from three tiers of adhesion - Gentle Release, General Use, or Long-Term Wear - as well as a variety of finished formats, including single-coated, double-coated, and transfer tapes.













**Flexible** 

**Extensible** 

**Breathable** 

Soft

Conformable

Choose from standard product offerings, or create your own unique combination of flexible substrates and skin-friendly adhesives that are optimized for your specific application needs.

# Flexible Substrates Urethanes Urethanes NylonReinforced Urethane (INNRU) Non-Wovens Soft Foams Three Tiers of Adhesion Gentle Release 3 days or less\*\*\* General Use 3-14 days\*\*



# **Diagnostics and Therapeutics**

### Flexcon® Omni-Wave™ Conductive adhesive transfer tapes

Omni-Wave™ allows you to select the signaling material that will meet your application's biosensing needs. From Long-Term Wear to Gentle Release, Omni-Wave™ is a hydrogel-free adhesive technology which can be used in electrodes and sensors. Omni-Wave™ is AAMI Compliant and passes ISO 10993-10 for sensitization and irritation.

### Benefits of hydrogel-free technology

Longer shelf life • Faster and easier converting • No special handling requirements • Lower cost packaging requirements Reduced shipping costs • Longer out-of-pack life of finished devices • No hydrogel-related skin reactions for patients



### Omni-Wave™ diagnostic and therapeutic biosignaling options





# Flexcon is Your Trusted Partner

### Quantifiable benefits of Omni-Wave<sup>™</sup> for our converter partners

We believe that technological advancements should be accessible to all. Flexcon has been fortunate to find alignment with likeminded companies.

One such partnership explored the financial benefits of replacing hydrogel with our Omni-Wave™ product line. The technology itself has advantages over hydrogel from a patient experience perspective; however, we decided to take our comparisons a step further to quantify the hard and soft costs associated with replacing hydrogel.

### The results included the following cost benefits:

### Longevity

- Shelf life is four to eight times longer than hydrogel, reducing the risk of costly waste
- Two-year out-of-pack life allowing for less expensive packaging

### Lower total manufacturing costs:

- = 3,000' long material rolls mean fewer roll changes
- Improved processing: faster, no special handling or refrigeration requirements
- Where required, less expensive EtO sterilization may be used

### Reduced shipping costs:

Lighter weight, reducing logistical issues and shipping costs at scale

Flexcon was able to pass these cost savings to our converter partners aiding them in manufacturing consistent medical devices with a higher net margin per unit.

### Omni-Wave<sup>™</sup>



# Comparable to hydrogel raw material costs

22% Lower manufacturing costs

50% Lower packaging costs

11%
Lower total production costs

### Layers of innovation for wearable devices

As a pioneer in developing groundbreaking materials, Flexcon partners with medical device companies to create and spec in cutting-edge medical grade adhesive solutions into wearable devices.

These quality products can be used as stand-alone components or paired up to provide multiple layers of functionality in 510(k) and CE-marked finished good medical devices.

Recently, Flexcon was included in the early design stages for a wearable bio-signal & ultrasound patch. The software and technology required to collect and interpret skeletal and muscular information using Al had been developed; however, affixing the device for the actual collection of the data for the duration of strenuous activity posed a challenge.

By joining the conversation in the early stages, we were able to partner with the design engineers to understand the wearable use case. Understanding the design and application requirements, Flexcon was able to provide a combination of skin-friendly adhesives (DermaFlex™) and electrically conductive transfer tapes (Omni-Wave™) to generate a multi-layered solution to meet the demands of the application. The finished product went to market meeting the requirements and timeline for the application.

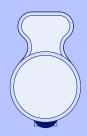
# Wearable Bio-Signals & Ultrasound System



PE 350 FWM PTP no PS printed

DermaFlex<sup>™</sup> NWP H-778 Omni-Wave<sup>™</sup> H-502

PFW Liner



# WBS Patch Neuromuscular & Body Motion Biomarkers Analysis

# **Pharmaceutical Labeling**

# Flexcon® PharmCal® Drug packaging and security

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

Specific PharmCal® products comply with 21 CFR 175.105<sup>+</sup>, REACH, RoHS/WEE, and ISO 10993-5, -10<sup>‡</sup>.



Small Diameter Labeling



Large Diameter Labeling



Conceal



Cryogenics & Cold Chain



Security & Tamper-Evident



Blood Bag Labeling



### **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**

Dimensional stability for high-speed auto-dispense labeling applications



# **Medical Device Labeling**

### Flexcon® MedFlex®

# FDA Class I and II medical devices used outside the body

Flexcon® MedFlex® products meet FDA standards and label durability that enables you to deliver labels designed specifically for the medical device industry. MedFlex® products provide you with:

### **FDA Compliance**

MedFlex® Plus and MedFlex® Overlam products are UL-Recognized and comply with IEC 60601-1 3rd edition durability rub tests. In addition, MedFlex® Plus films are UL-Verified. Products achieve FDA's Title 21 Part 801 labeling requirements.

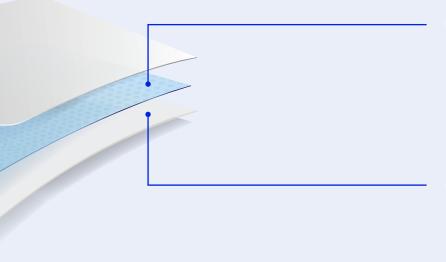
### **Zero Adoption Costs**

When specific minimum purchase conditions are met, Flexcon will reimburse you for UL's flat adoption fee – reducing your transfer cost to zero.

### **UL-Recognized/UL-Verified**

MedFlex® products are immediately adoptable into your UL file, providing you with the label stock and finishes you need to produce a compliant medical device label.







### **Robust Adhesion**

 Adhesives developed specifically for the most challenging and demanding applications



### **Optimized Liners**

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

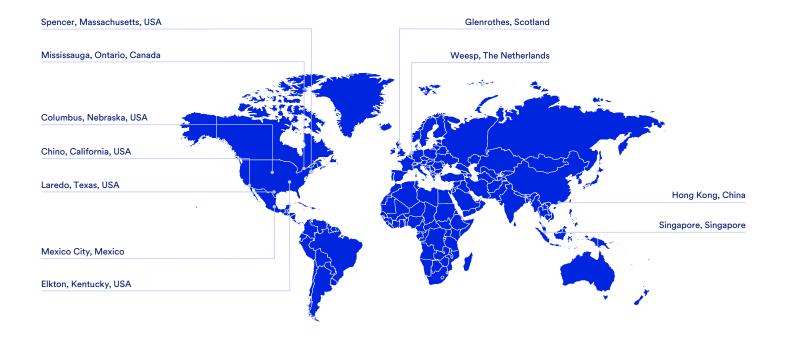




# **Supporting Businesses Globally**

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.





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