



**3M** Science.  
Applied to Life.™

# We'll stick with you.

**3M Medical Materials & Technologies**

**A guide to partnership and 'go-to' products  
for wearable medical device applications**



# Don't let skin be the end

You have a great design. Now you have to attach it to human skin. While that may seem like a straightforward process, it's often not.

Designers and engineers of high-tech medical devices have to consider the human skin interface during product development – and not just as the last step before market. Will a device stay firmly attached to both dry and moist skin for the required wear time? How thick will the finished piece be? There are many factors to consider. Ergonomic requirements, target patient population characteristics and skin allergens are just a few of the considerations designers need to take into account when selecting the right adhesive material. It's an important decision, as a wrong choice could result in delays.

## We can help

With over 55 years in the medical adhesive business, no one knows skin better than 3M. We understand the unique challenges of this delicate surface and of the larger design process. As your partner from the beginning, we can help you choose the right materials for your needs and navigate your way to market, with confidence.

## A comprehensive portfolio of medical device materials

As a global leader in the health care industry, 3M's advanced technologies have contributed to the creation of more than 10,000 new health care products worldwide. We supply the medical device manufacturing, design and supply industries with a carefully selected line of medical grade tapes, coatings, adhesive technologies, and components.

- ▶ Stick-to-skin
- ▶ Stick-to-device
- ▶ Microfluidic solutions
- ▶ Membranes
- ▶ Flexible circuits

The Food and Drug Administration does not define what constitutes 'medical' grade for components at this time.



### Application considerations for basic skin challenges

- ▶ Wear time
- ▶ Comfort
- ▶ Breathable
- ▶ Gentle
- ▶ Repositionable
- ▶ Water resistant
- ▶ Device shape
- ▶ Coverage area



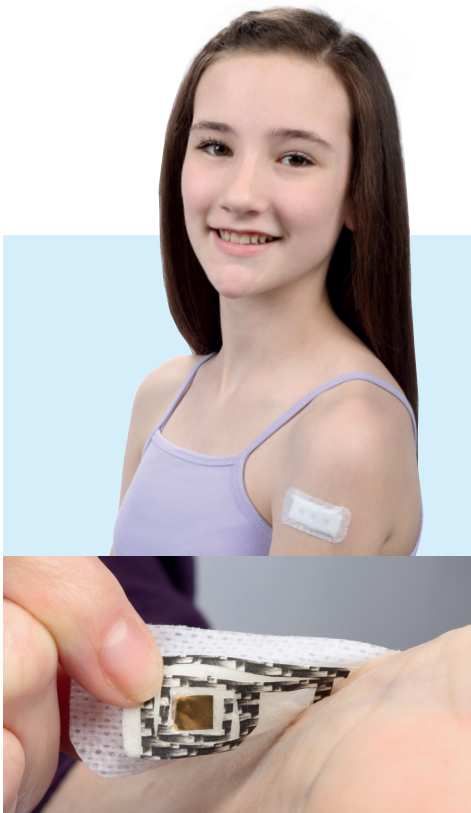
More information can be found on our website [3M.com/wearitwell](https://www.3m.com/wearitwell)

## Challenges of skin as a substrate

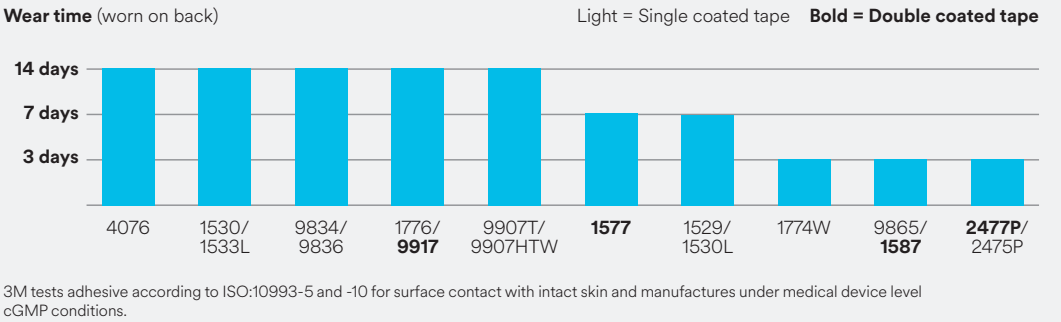
- ▶ Skin is a living organ. It is constantly changing, which makes it a difficult surface to attach to
- ▶ Skin needs to breathe and retain the ability to absorb and expel moisture
- ▶ Skin is difficult to mimic for testing and evaluation of product performance

## Details that affect adhesion

- ▶ How long will a device be attached?
- ▶ Where on the body will the device be attached?
- ▶ What are the device characteristics?
- ▶ Who is the targeted end user?



## Product wear time testing on healthy adults\*




## Our 'go-to' products for wearable medical device applications\*

	Product	Backing	Breathable	Repositionable	Conformable	Water resistant	Wear time (days)
New ▶	4076	Nonwoven	•		•		≤14
	1530	Nonwoven	•				≤14
	1533L	Nonwoven	•				≤14
	9834	Polyurethane	•		•	•	≤14
	9836	Polyurethane	•		•	•	≤14
	1776	Nonwoven	•		•		≤14
	9917	Nonwoven	•		•		≤14
	9907T	Nonwoven	•		•	•	≤14
	9907HTW	Nonwoven	•		•	•	≤14
	1577	Polyester				•	≤7
	1529	Nonwoven	•				≤7
	1530L	Nonwoven	•				≤7
	1774W	Foam			•	•	≤3
	9865	Polyethylene				•	≤3
	1587	Polyester				•	≤3
	2477P	Thermoplastic Elastomer	•	•	•	•	≤3
	2475P	Thermoplastic Elastomer	•	•	•	•	≤3

Light = Single coated tape Bold = Double coated tape

\*Length of wear time can vary according to application, thickness, area on body and age of user.





# Material selection and partner selection go hand in hand.

It's simple: as your partner from the start, 3M can help make your material selection process a whole lot easier.

We offer a wide variety of adhesive, backing and tape construction options for different manufacturing processes and patient populations. From highly active patients to those with fragile skin, we can help you select components that both function well together and maintain skin integrity.

As a collaborative partner with decades of experience and global leadership, we also offer supply chain traceability. We comply to ISO:13485 operating standards and offer ISO:10993 biocompatibility tested components.

**Working together, we can help  
your customers 'Wear it well'.**

Visit our website to learn more:

**3M.com/wearitwell**

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