

How to Choose the Correct Adhesive for your Wearable Device



Choosing the right adhesive for your wearable device can be a bit trickier than once thought. Through innovation and development of medical grade adhesive tapes, there are quite a few options that will help your device “stick” to the skin, but is it the *correct* adhesive for your application? Product developments have helped support the growth of the medical device industry to offer different characteristics such as short versus long term wear, atraumatic removal from the skin to avoid MARS (Medical Adhesive Related Skin Injury) and many more.

The skin as a substrate provides many challenges such as:

- The skin is constantly changing and regenerating (temperature, moisture, cell growth, cell death)
- The skin’s surface can vary from person to person (hairy, oily, dry, wrinkly, stretchy, smooth)
- The skin is subjected to shear (clothing rubbing, limb movement)
- The skin is exposed to various environments and contaminants (humidity, cold, heat, precipitation, sweat, lotion)
- Skin condition (age, wounds and/or abrasions, sensitivity)

Despite some of these more challenging skin characteristics, medical grade adhesive technology has made it possible for you to wear a device to track and monitor almost anything. Making sure you choose the correct adhesive is key to making sure your application is of the highest quality possible. Below are some of those key questions to consider when developing your wearable device.

- Who is my target market? Who will be wearing my device?
- Where on the body will my device be located?
- How long does my device need to be worn?
- What shape is my device?
- Does my device need to be repositioned?
- Will my device need to be sterilized?
- What environmental factors will my device be exposed to?

Working with a supplier that understands your needs and the materials will save you a lot of time in the research and development phase of your application. Polymer Science, Inc. has a dedicated team of engineers and technical staff that works quickly to provide you solutions, allowing your project to expeditiously move from conception to production. Along with our state-of-the-art equipment, we provide the capabilities to develop a quality product consistent with your application requirements.

Polymer Science, Inc. offers P-DERM® Silicone Gel Adhesives. They offer a gentle yet effective adhesion and naturally conform to the contours of the body. P-DERM® Silicone Gel Adhesives are waterproof, hypoallergenic and resistant to bacteria. In addition to silicone gel adhesives, Polymer Science, Inc. has a complete line of P-DERM® Medical Grade Acrylic Adhesives. They exhibit strong initial tack to porous and non-porous materials and can be laminated to many surfaces including films and foams. P-DERM® Hydrogel Adhesives are designed to hold moisture at the skin surface, offering a soothing and gentle solution for burns, device fixation, blisters and other skin contact applications.

Contact us today for more information or to request a sample of our skin contact adhesive materials.