

**Company:** Consensus Orthopedic

**Location:** El Dorado Hills, CA USA

**POC:** AJ Habib, Senior Product Development Engineer

**Website:** <https://consensusortho.com>

**Avery Dennison Medical Products used:**

MED 5718P, MED 8345

**Converter:** MBK Tape Solutions

**Product name:** TracPatch



## Questions/ Answers:

**1. Why did you choose the MED 5718P as your skin contact tape? Why did you choose MED 8345 for the tie layer? How many other tapes did you test before landing on the Avery Medical tapes?**

We chose MED 5718P as our skin contact tape, because it was recommended by our converter for its comfort, durability, and ease of removal. Our product is designed for total knee arthroplasty patients in their post-operative episode of care. This is a patient population that tends to be older and will undergo a significant amount of discomfort in their post-op episode of care. It's important that we don't introduce any additional discomfort that may cause them to get frustrated or stop using the product. We've found that MED 5718P is a good combination of durability, often meeting or exceeding our 10-14 day use requirement, while still providing such a comfortable experience where many patients report forgetting that they're wearing anything at all. It's also relatively easy to remove if necessary, in fact, one of our lead physicians—who happens to be in his 70s—was testing the product himself to see how his patients would respond to it. During one of our trainings he put the adhesive on his skin, and after about an hour, without warning anyone, he bent over and ripped it off... and I mean RIPPED. IT. OFF. While everyone in the room grimaced in sympathetic pain, he stood up smiling, held the device in his hand, and said that he hardly felt a thing.

We tested about 5-7 other adhesives, and we landed on MED 5718P because several of the others were not capable of lasting the 10-14 days required, others were too aggressive and could not be easily removed prior to their end of life, and a couple others failed because one or more people in the test group had minor adverse reactions. MED 5718P was right in the sweet spot in terms of durability and comfort, and there were no adverse reactions reported in the initial testing.

As for the tie layer, we really had to rely on our Converter for their recommendation of an adhesive that was biocompatible, but also met the strength requirement that exceeded the strength of the skin adhesive layer.

**2. Can you explain to me how the MED 5718P skin contact tape helps your device function? What are the benefits you see by using this tape? I heard there is a good story with your President using the tape for 21 days...can you elaborate?**

The adhesive helps our product function by enabling us to create strong reliable connection to the skin. The device is connected to the skin in order to allow us to measure and track movement of the knee after surgery. It's important that we can rely on the connection because if the adhesive loosens, it can hinder the accuracy of the sensors or worse, the device can fall off, halting data collection and possibly causing the patient to lose the device. And yes, during the prototyping phase of development, Curt, the president of the company—could always be found with a TracPatch strapped to his leg, he was never afraid to hike up his trousers and show off his hairy legs to anyone willing to listen about the miracle of TracPatch. He wore it to work, on personal vacations, and every business trip, putting the devices through tens of thousands of steps per day, bathing, travel, and I even think he was practicing tai chi at the time. Every time he put on a new set of adhesives, he'd marvel at the durability, and it wouldn't surprise me to hear that he had a pair last even longer than 21 days.

**3. What kind of learnings did you and your team find when developing a stick-to-skin wearable using the Avery Dennison Medical tapes on the Consensus product?**

We've learned that application-specific product testing is very important. There are hundreds of adhesives out there that are perfectly suited for their applications but may not be perfect for yours. Even products that have the perfect specifications on paper may not meet the user needs, so it's important to get the product on testers- particularly testers who represent the demographics of the target user population.

**4. How has the technical support from Avery Dennison Medical been during your development phase for the TracPatch?**

In one instance, we asked our converter to provide biocompatibility test data for 5718P in order to support our biocompatibility requirements for the FDA, and we had summary reports within a week. Avery Dennison Medical was pretty prompt to get that information over to our converter in that amount of time.

**5. Would you recommend Avery Dennison Medical to other wearables device companies looking for a materials science company needing to spec in a multi-layer tape system for their device?**

Yes, I would absolutely recommend Avery Dennison products to a colleague.