



DOWLEX™ Polyethylene Resins and ELVALOY™ AC Acrylate Copolymers

How can medical garments be less porous but more breathable?

Our most recent development is changing the game for multilayer medical films

Ask any healthcare worker – or anyone who spends a lot of time in medical garments like drapes and gowns. They'll tell you that breathability is absolutely critical.

After all, insufficient breathability can easily lead to elevated body temperature, perspiration, skin irritation, extreme discomfort – and even serious medical conditions. So, it's easy to see why breathable garments are so important.

There's just one problem. The main purpose of medical garments is to provide a protective barrier against potential harm from bodily fluids, bacteria, viruses...and increasing breathability also typically increases porosity...which reduces barrier performance.

So, how can we have the best of both worlds – high levels of protection without compromising breathability?

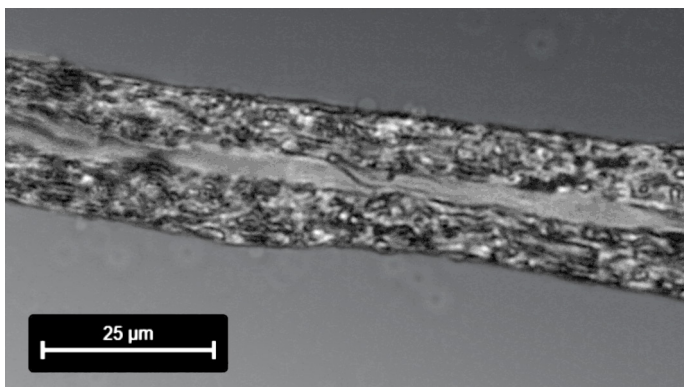
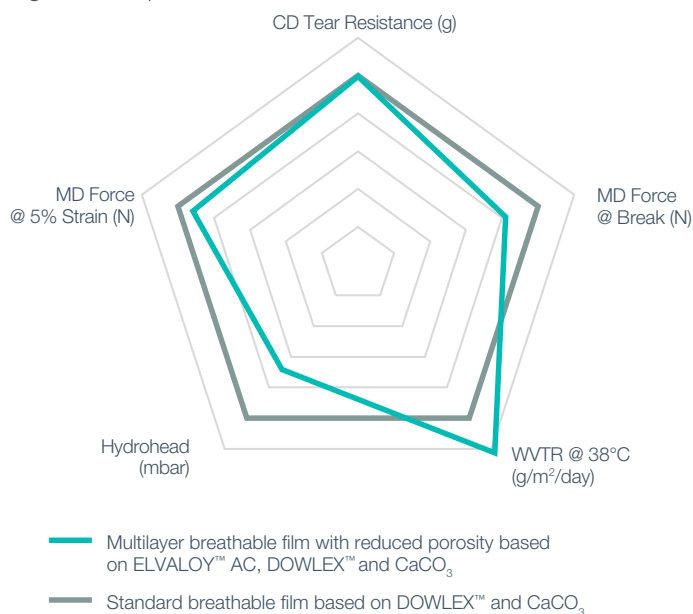
It's the little things that matter

Our latest innovation in breathable film solutions helps enable less porous formulations while maintaining crucial physical and mechanical properties.

Using our broad portfolio of materials, including DOWLEX™ Polyethylene Resins and ELVALOY™ AC Acrylate Copolymers, we've been able to develop multilayer breathable films that reduce the level of pores while still meeting key requirements and specific needs (Figure 1). The key? A thin layer of ELVALOY™ AC that reduces porosity while still allowing a high water vapor transmission rate (WVTR) and excellent breathability.



Figure 1: Comparison of 15 GSM film at a stretch ratio of 3.5^(1,2)



A thin, monolithic core of ELVALOY™ AC Acrylate Copolymer helps create the potential for multilayer breathable films with reduced porosity.

⁽¹⁾Typical values, not to be construed as specifications. Users should confirm results by their own tests.

⁽²⁾GSM = grams per square meter

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Better together

Combining our experience with our customers' enables us to fine tune innovative solutions to address specific needs. We believe that this not only helps improve hygiene wearables, but is also helping create a brighter future.

We're constantly working to produce thinner, lighter mono-material solutions; design for recyclability; help reduce waste and improve recycling streams. We're also investing in bio-based feedstocks and investigating other advanced technologies.

We're excited about advancing the science of hygiene absorbent products and would love to discuss your medical film challenges. Please visit dow.com or contact your Dow representative to get the conversation started.



Disclaimer: At the present time, this product has not been tested against any finished medical or surgical gown or drapes end-product requirements for barrier performance (e.g., hydrostatic pressure, viral and blood penetration) or tensile and tear resistance. Customers should seek their own legal guidance for the intended use or end-use application.

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