INFUSE™ Olefin Block Copolymers and ELVALOY™ AC Acrylate Copolymers

Ultimate comfort with soft elastic solutions

Combining advanced materials – and our efforts – creates exciting opportunities for softer, better fitting elastic solutions

Consumers have spoken. Diapers, training pants and adult incontinence products that pinch, bind or sag are simply unacceptable. And, as demand for comfort and convenience continues to grow, manufacturers are looking for ways to improve the softness and fit of elastic components (diaper ears, waistbands, side and body panels).

INFUSE™ Olefin Block Copolymers (OBCs) answer this challenge by enabling differentiated elastomeric films with:

- Softer stretch performance compared to conventional random propylene-based copolymers (Figure 1).
- Excellent tensile and hysteresis performance for low permanent set at different elongations.
- Robust processability with a wide range of formulations, processing and sustainability advantages.

Figure 1: Soft stretch performance comparison[1]

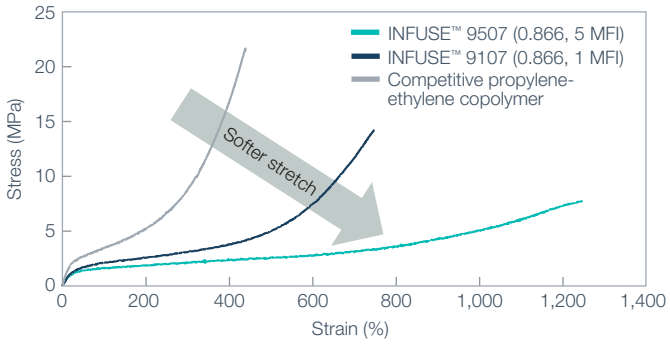
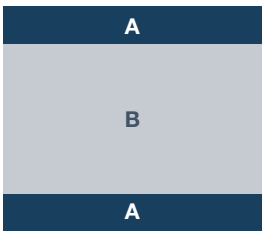


Figure 2: Typical elastic film designs[1]

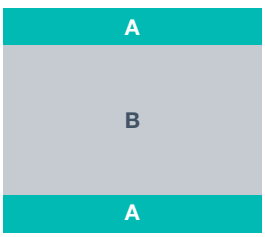


A/B/A Coextruded – All INFUSE™ OBC

Layer A: INFUSE™ OBC; Additives: AB, Slip, TiO_2

Layer B: INFUSE™ OBC; Additives: Slip, TiO_2

Basis weight: 50 GSM[2]



A/B/A Coextruded – INFUSE™ OBC with ELVALOY™ AC skin

Layer A: ELVALOY™ AC

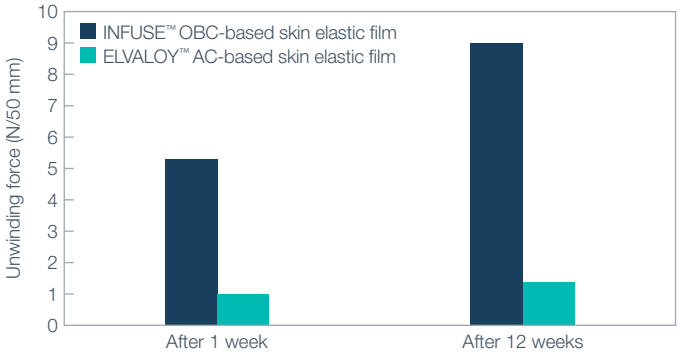
Layer B: INFUSE™ OBC; Additives: Slip, TiO_2

Basis weight: 50 GSM[2]

A winning combination

Our versatile INFUSE™ OBCs are well suited for monolayer and coextruded cast and blown film processes. Equally important, these proven materials can be coupled with ELVALOY™ AC Acrylate Copolymers in multilayer formulations (Figure 2) that help deliver reduced stickiness and excellent unwinding behavior of the film roll (Figure 3), all while maintaining robust hysteresis performance (Figures 4 and 5, next page).

Figure 3: Unwinding force of elastic films)[1]



Measured after 1 and 12 weeks of extrusion at unwinding speed of 10 m/min after 20 m of unwinding film.

[1] Typical values, not to be construed as specifications. Users should confirm results by their own tests.
[2] GSM = grams per square meter"

Hysteresis testing also shows that elasticity can be improved by pre-stretching INFUSE™ OBC-based film, with extension forces decreased for softer stretch performance and significantly reduced permanent set after the second stretch. In addition, our diverse portfolios of INFUSE™ OBCs and ELVALOY™ AC Acrylate Copolymers allow the final hysteresis and tensile performance to be tailored to meet specific needs.

Figure 4: Hysteresis behavior of elastic film based on INFUSE™ OBC and ELVALOY™ AC in CD at 100%[1]

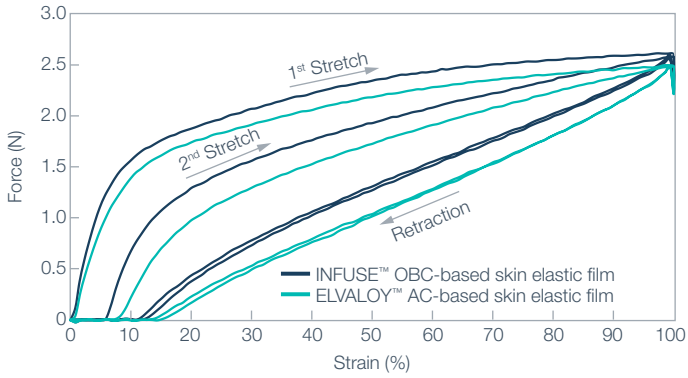
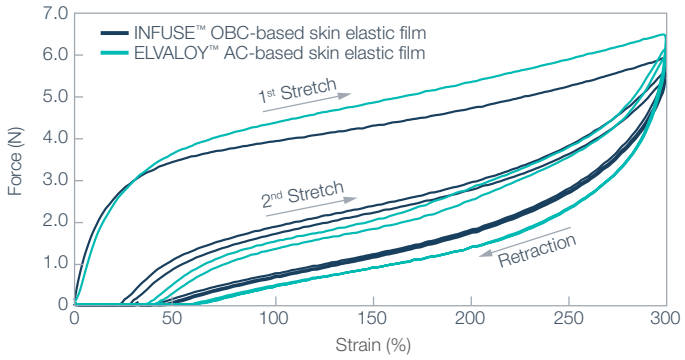


Figure 5: Hysteresis behavior of elastic film based on INFUSE™ OBC and ELVALOY™ AC in MD at 300%.[1]



Better together

We believe that working closely with our customers is the key to innovation, to improving hygiene wearables – and to making a positive impact on the future.

We're constantly striving to develop 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'd love to hear about your elastic film challenges. By joining forces, we can help produce more sustainable, circular hygiene solutions. Please visit dow.com or contact your Dow representative to get the conversation started.

Infuse™ olefin block copolymers by DOW

Elvaloy™ AC acrylate copolymers by DOW

For more information about Dow, visit www.dow.com. To contact a Dow representative, visit www.dow.com/contact.

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