



## ArgoFlex®

# Waterproof Breathable Films

**Ideal for Textile Lamination and Use in Rugged Performance Apparel, Gloves and Footwear**



SWM's ArgoFlex® brand waterproof-breathable films are the product-of-choice specified by one of North America's largest retailers of hunting and other outdoor performance apparel.

The high moisture vapor transmission rates provided by these thin, hydrophilic films make them ideal for lamination to fabrics used in today's rigorous performance apparel and footwear. In addition to waterproofing the garment, glove, shoe or boot, they provide outstanding breathability to keep the hunter, climber, skier or other sports enthusiast dry and comfortable inside their clothing.

Other properties that make super-thin ArgoFlex films ideal for use in textile applications include good hand, drape, quietness, excellent stretch and recovery. Their inherent adhesive characteristics also provide very durable bonds between the outer fabric layer and any inner lining material. Additionally, these durable films are compatible with most common adhesive laminating systems.

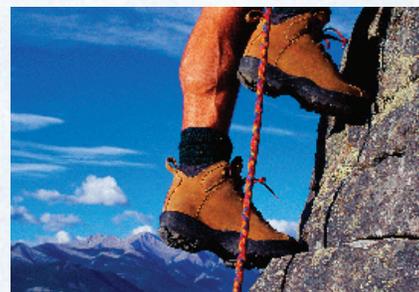
ArgoFlex-brand films are produced without the addition of lubricants or processing aids that might migrate to the film surface. This results in laminations of extremely high durability.



### PRODUCT OPTIONS FOR THE MOST DEMANDING APPLICATIONS

ArgoFlex-brand films are extruded from thermoplastic polyurethane and copolyester resins. They may be cast onto polyethylene, polyester or paper carriers in thicknesses from 0.5 to 6.0 mils and in widths up to 68 inches. Mid-performance waterproof breathable films are also available without carrier in thicknesses of 0.8 mil or greater.

These films may be enhanced with antibacterial, antifungal and antistatic packages. ArgoFlex-brand films also exhibit excellent abrasion, temperature and chemical resistance when compared to films produced from other common polymers. Surface finish offerings include gloss, smooth and matte.



### WHY SWM FILMS?

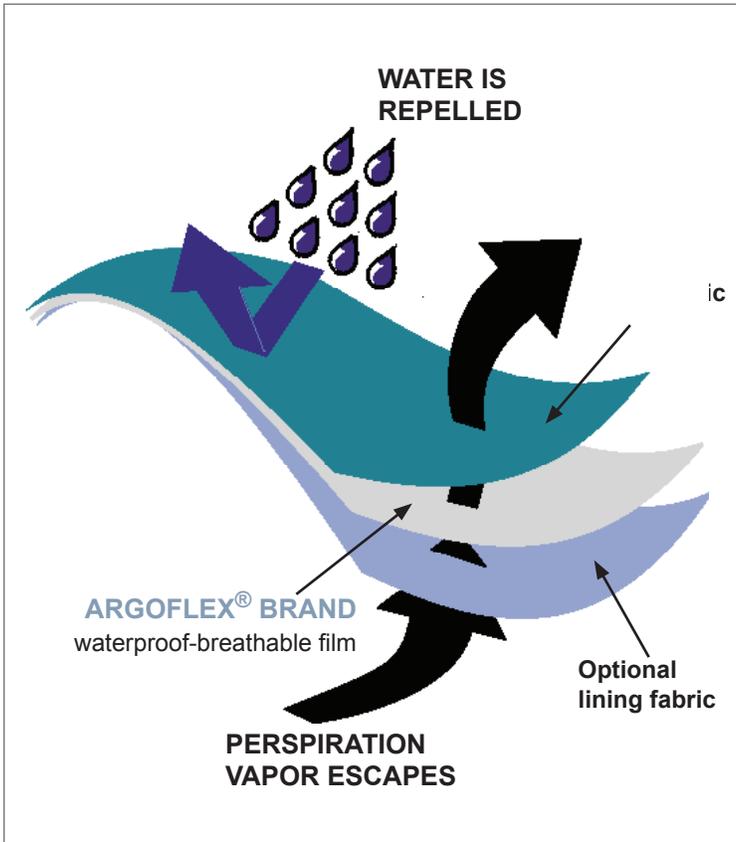
Since its entry into the specialty film business in 1988, SWM has been a leader in the manufacture of high performance, super-thin TPU and other TPE films for high performance applications like performance apparel and footwear. Just as important as its reputation for superior quality, SWM has the

organization, relationships and expertise to navigate the most complex global supply chains, be it to Europe, Asia, Africa or the Americas. We invite you to see why we are increasingly becoming the specialty film supplier of choice for the performance apparel and footwear industries.



APPLICATION BULLETIN

# HOW ARGOFLEX® WATERPROOF-BREATHABLE FILMS WORK TO KEEP YOU DRY AND COMFORTABLE



To create a waterproof garment that is also breathable, allowing the wearer's perspiration vapor to escape, a garment manufacturer will typically employ a textile composite. This composite is made by a fabric laminator who sandwiches a layer of ArgoFlex-brand waterproof-breathable film between two layers of fabric. The top fabric is normally the final outer layer of the garment, the bottom an optional inner lining material.

ArgoFlex-brand films are available in a variety of polyurethanes and copolyesters, depending on the hardness, elongation, and moisture vapor transmission rate (MVTR) required for the garment and its end-use. Each is a solid, monolithic, hydrophilic membrane with no continuous pores through the film. Rather, moisture passes through by absorption into the membrane on the inside face and is "transported" to the outside by solid-state diffusion where it evaporates upon exposure to the atmosphere.

At the same time, the solid ArgoFlex film creates a waterproof barrier that physically repels rain or other liquids from passing through to the inside of the garment. The combination is a functional piece of high-performance apparel that keeps the wearer dry and comfortable.

## TYPICAL ARGOFLEX-BRAND FILM PROPERTIES

Transport Series	Film Type	Shore Hardness	Elongation	MVTR (1-mil film)
TX1300	polyurethane	80A	600-700%	650 g/m <sup>2</sup> /day
TX1500	polyurethane	80A	600-700%	800 g/m <sup>2</sup> /day
TX2000	copolyester	45D	600-700%	725 g/m <sup>2</sup> /day



Revised: December 31, 2014



SWM INTL  
 53 Silvio O. Conte Drive  
 Greenfield, Massachusetts 01301 USA  
 tel: (413)772-2564 fax: (413)772-2565  
 e-mail: [ams@swmintl.com](mailto:ams@swmintl.com) web: [www.swmintl.com](http://www.swmintl.com)