

Argotec<sup>™</sup>  
Films



# Argotec<sup>™</sup> Films Product Overview

# SWM International – Your Materials Partner

As experts in highly engineered films made from resins and polymers, we provide solutions to make products stronger, more durable and with increased performance. SWM™ products deliver industry leading performance with the full line of Argotec™ film products. Learn more at [swmintl.com](http://swmintl.com) or contact us at [ams@swmintl.com](mailto:ams@swmintl.com) today to learn how you can partner with SWM to start innovating **essential** solutions for your applications.

## Manufacturing Excellence

Our fundamental expertise is our ability to consistently produce high quality resin based Polyurethane (PU), Thermoplastic polyurethane (TPU) and Ethylene Vinyl Acetate (EVA) film. What can we engineer for you?

## Custom Engineering

We work with our customers to understand their requirements, anticipate their needs and create tailor-made solutions.

## Innovation

Our global team works together to develop cutting edge solutions to solve our customers' toughest challenges.

## Global Manufacturing

ISO 9001:2015, ISO 14001, ISO 50001 and OHSAS 18001 certified manufacturing facilities in the Americas, Europe and Asia supply customers' global needs.

## Argotec Film Products

### Antimicrobial Film



Uncoated, with antimicrobial layer

- High touch, low clean surfaces
- Kiosks, screens & monitors

Resins: TPU

### Edge Seal Film



Moisture & solvent resistant barrier

- Automotive
- Building & construction

Resins: TPU

### Graphic Film



Clear or white, flexible & durable

- Fleet graphics
- Outdoor signage
- Printed wraps

Resins: TPU

### Industrial Film

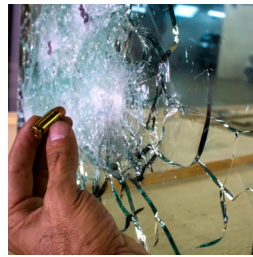


Flexible, durable & heat resistant

- Consumer goods
- Industrial
- Packaging
- Textile

Resins: PU & TPU

### Interlayer Film



Clear & durable

- Switchable glass
- Bullet & blast proof glass
- Impact resistant glass

Resins: TPU & EVA

### Medical Film, Foam, Gel & Tape



Breathable, comfortable & durable barrier

- Bandages
- Wound care & scar reduction

Resins: TPU & PU

### Medical & Dental Utility Film



Thick & puncture resistant

- Dental
- Industrial
- Medical

Resins: PU & TPU

### Surface Protection Film



Durable, glossy & smooth

- Automotive
- Aerospace
- Wind Energy

Resins: TPU

### Textile Lamination Film



Waterproof & breathable

- Apparel
- Extreme sports equipment

Resins: TPU



## Aerospace

Surface protection, wind shields, paint protection for equipment



## Architecture & Interior Design

Decorative glass, SMART glass, privacy glazing



## Automotive

Paint protection, surface protection, panoramic roofs, security glass



## Building and Construction

Infrastructure, building graphics, weather resistant glass



## Consumer Goods

Extreme sports equipment (boards, helmets, etc), waterproof apparel (rain coats, hiking boots, etc)



## Defense

Bullet- and blast-proof windows, surface protection for equipment



## Energy

Wind energy turbine blade protection



## Graphics

Retail, advertising, industrial wraps, automotive graphics



## Industrial

Interlayer film, graphics, surface protection, industrial lamination, textile lamination



## Marine

Surface protection, paint protection



## Medical & Dental

Wound care, IV dressings, medical tape, invisible braces, inflatable equipment, seat cushioning,



## Packaging

Sterile packaging, parts protection

# Argotec Film Family of Products



## Antimicrobial Film

Formulated with antimicrobial properties that protect against the growth of mildew and bacteria, this type of film is designed for use on a variety of shared surfaces. Common applications include kiosks, touch screens & shared equipment. Key benefits include:

- Formulated with antimicrobial properties that protect against growth of bacteria
- Maintain surface appearance with UV and stain resistance (non-yellowing)
- Longevity from high durable, self-healing, scratch and chip resistance



## Edge Seal Film

Designed to keep moisture and harmful chemicals out of laminated glass composites. Key applications include use in architectural design and transportation glazing applications. Key benefits include:

- Protects glass laminates
- Dramatically enhanced moisture and solvent resistance
- Aesthetically pleasing appearance
- Reduced interlayer and laminate degradation
- Reduced edge chipping during handling and installation



## Graphic Film

Argotec white printable and clear overlamine films utilize a proprietary, lubricant-free urethane resin technology that accepts all commercial adhesive systems and ink jet printing inks. Common applications include advertising wraps, equipment skirts, decals, exterior signage, fleet/vehicle graphics and trade show graphics. Key benefits include:

- Strength & durability
- Vivid color printing
- Highly conformable halogen- and phthalate-free material



## Medical & Dental Utility Film

We extrude utility films from a variety of PU, polymers and blends for a diverse array of medical applications outside the wound care market. Common applications include inflatables, bedding, pressure cuffs and probe covers. We also produce dental alignment films. Key benefits include:

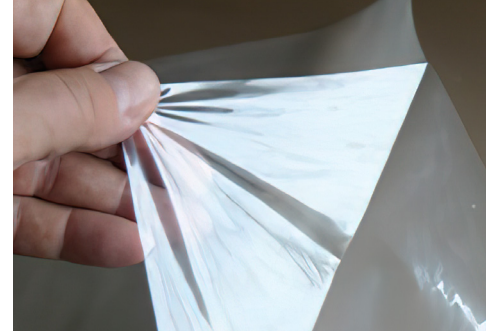
- High strength & durability
- Thick yet pliable
- Puncture resistant
- Excellent heat sealing & thermo-formable properties
- Strong air-holding qualities



## Paint & Surface Protection Film

Argotec paint and surface protection films provide long-lasting shielding for cars, trucks, appliances, cell phones, computers – any bare or painted metal, glass or plastic surface that is vulnerable to damage from abrasion, chips, chemicals or general wear. Key benefits include:

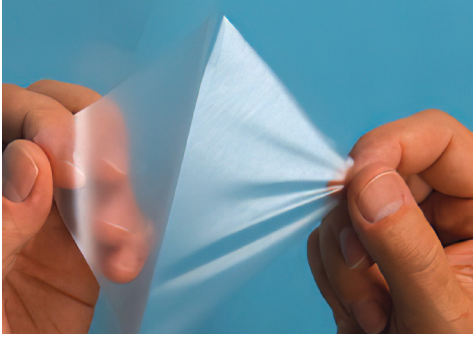
- Non-yellowing UV resistance
- Paint like gloss finish
- Unmatched optical clarity
- Flattest films in the industry
- A wide range of hardnesses
- Tough, durable, abrasion & chip resistance
- Resistant to bugs, skin oils, road and other chemicals



## Textile Lamination Film

Textile lamination film can be made thin or thick, gloss or matte, aliphatic or aromatic, polyester or polyether – a full line of high performance TPU films. Common applications include performance apparel/footwear, hazardous material suits, extreme sports equipment and seating. Key benefits include:

- Waterproof, breathable barrier for user comfort and protection
- Versatile, yet durable
- Puncture, abrasion, and chemical resistance when bonded
- Super thin film
- Single film-to-fabric lamination process



### Industrial Film

Store, ship and handle your products while keeping them intact. SWM offers a complete line of industrial film to contain, protect and pack a diverse range of consumer products and components. Key benefits include:

- High strength
- Conformable
- Durable
- Puncture resistant
- Strong air-holding qualities
- Excellent heat sealing and thermoformable properties



### Interlayer Film

Our diverse interlayer film product line is custom engineered for a variety of applications. Common applications include bullet/impact resistant glazing for buildings like embassies, correctional facilities or banks, armored vehicles, aircraft windshields; or automotive glazing and SMART glass. Key benefits include:

- Optically clear
- Strong & durable
- Hot or cold temperature characteristics
- Do not require refrigerated storage
- Do not contain plasticizers



### Medical Film, Foam, Gel & Tape

Argotec medical films provide comfort and performance benefits to patients and staff alike. Common applications include frame dressings, drapes, IV site dressings, transdermal patches, thin film wound dressings, cast covers, surgical gowns, orthopedic gel insoles, gel-filled positioning pads, inflatable support bladders and pressure infuser cuffs. Key benefits include:

- Breathability and conformability for patient comfort
- Liquid and viral barriers
- No plasticizers to cause allergic reactions

## Additive Packages

Argotec film and sheet is available with standard additive packages or custom formulations that can provide the following special characteristics:

- Flame resistance (UL V-O or equivalent)
- UV resistance to minimize yellowing or degradation.
- Antibacterial technology that reduces growth of damaging bacteria/micro-organisms that may degrade exposed film surface
- Anti-static films
- Conductive films
- Extremely high optical clarity for aliphatic
- Custom engineered slip properties to match customer requirements
- NSF, FDA and USP approvals
- Anti-blocking properties in blown film
- Wide variety of custom colors

# Argotec Films - The Clear Choice

SWM offers high performance, polyurethane film and sheet for a wide variety of critical "can't fail" applications. SWM has extensive experience in flat die, cast on carrier, and blown film extrusion technologies, as well as extrusion coating and multilayer constructions. We also offer standard and custom additive packages.

SWM offers precision film & sheet products made from the full range of extrudable polyurethane resins, as well as co-polyesters and other difficult to extrude specialty thermoplastic elastomers.

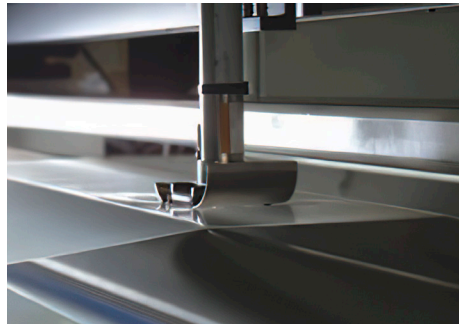
A technical force in the specialty films industry, SWM continues to set the standard for innovation, capability,

and commitment to excellence in film extrusion and customer satisfaction.

This is evidenced by the SWM Film Innovation Center, the industry's first of its kind research & development facility devoted solely to advancing the state of polyurethane film and sheet. With a hard walled white room environment, flat die and blown film lab lines, as well as production level extrusion lines and a fully dedicated research staff, this resource allows SWM to continue to provide its customers with unequalled technical service for decades to come.



Class-7 soft-walled clean rooms inside an 8,000 square foot hard-walled white room



Digital in-line gauge control help ensure the best possible film quality



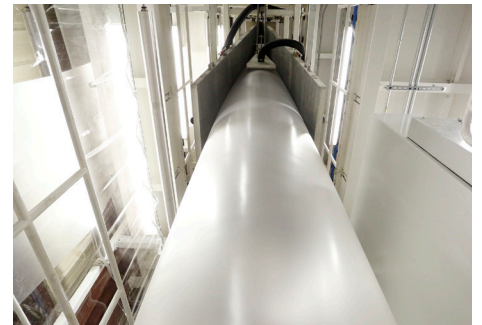
Digital guide systems provide quality control during manufacturing



Clear, aliphatic TPU film being made in an 8,000 sf hard-walled white room



Argotec EVA film line located in Greenfield, MA, USA



Photographic inspection systems provide quality control during manufacturing



Argotec graphic film production line located in Gilberdyke, UK



Film production equipment inside a clean room located in Greenfield, MA, USA



Additional film line and resin extruder in Greenfield, MA, USA



Blown film lab lines can extrude up to 86" (218.4 cm) wide and 1.0 to 12.0 mils thick



Computerized mixers for accurate film batches



In-line visual camera inspection ensures consistent quality

## Advantages of Argotec Films

Why are Argotec films specified in critical applications around the world? For the same reason we extrude over 50% of the world's total usage of optical grade aromatic polyurethane films. Designers, laminators, adhesive coaters, fabricators and OEMs with critical applications are looking for the same thing as aerospace canopy manufacturers: **Consistency!** And that's what Argotec polyurethane films deliver:

- Consistent film recipe control, from one batch to the next
- Consistent gauge control, from one part of the roll to another
- Lays flat to eliminate voids in lamination
- Lubricant-free processability in the customer's operation
- Consistently clean product
- Consistency of performance characteristics
- Availability of polyester, polyethylene, and paper carriers
- Compatibility with most commercial adhesive systems
- Ability to withstand multiple commercial cleanings, plus Ethylene Oxide (EtO), gamma, and autoclave sterilization

Whether it's aerospace canopies and windows, critical medical devices, blast-resistant glass, helicopter rotor blades, bullet-resistant vests or graphic advertising that wraps around your local city bus, you can depend on the same high quality polyurethane film and sheet from SWM, batch after batch, roll after roll. Consistency is what we do best!



The SWM global infrastructure provides strategically placed experts and facilities to respond quickly and efficiently to rapidly evolving market needs. Argotec is manufactured in Greenfield, USA, Gilberdyke, UK and Suzhou, China. SWM is focused on advancing the products for interlayer, optical and surface protection films, advanced materials and technologies in our ISO 9001, ISO 14001, ISO 50001 and OHSAS 18001 certified facilities. Our diverse product lines are recognized worldwide for their superior performance in a variety of applications.



SWM locations shown (from top to bottom) Greenfield, USA; Gilberdyke, UK and Suzhou, China

## About SWM

SWM is a leading global performance materials company. We use natural fibers, resins, and polymers to provide essential solutions that enhance product performance and help our customers win in a variety of industries and applications. For further information, please visit our web site at [www.swmintl.com](http://www.swmintl.com).

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