

MONOLITHIC FILMS WITH *EXCEPTIONAL* BREATHABILITY, DURABILITY & BARRIER PROPERTIES

Join Community Professionals Who Trust Arnitel®

Across diverse industries, professionals trust Arnitel® to overcome their toughest challenges in critical environments. Here's how Arnitel® is making a difference:

- **Medical Applications:** Arnitel® is the top choice in health-critical settings, providing essential respiratory tubing for ventilators, wound coverings, and protective gowns, where durability and safety are essential.
- **Water/Weather Resistive Barriers (WRBs):** Whether it's for house wrap, roofing, or tapes, top builders rely on Arnitel® for its water and weather resistance.
- **Food Packaging:** For dependable food packaging, companies use Arnitel® to safely and efficiently extend the shelf life of fresh produce, demonstrating trust in its proven reliability.
- **Consumer Goods:** Preferred by top brands, Arnitel® enhances outdoor apparel by combining weather resistant durability with comfort — ideal for products such as rain wear, ski gear, and shoe liners.

Choose Arnitel® and experience why so many leaders across industries already count on its proven, superior performance.



Breathable Monolithic Films – Advanced Protection

When performance matters, Arnitel® delivers. This high-performance thermoplastic copolyester (TPC) creates an exceptionally breathable monolithic film that provides superior barrier protection from liquids, micro-organisms, viruses, and other harmful agents.

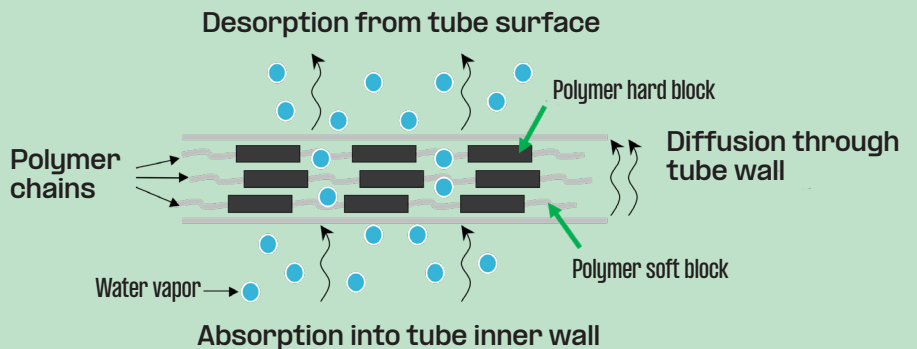
Monolithic breathable films are non-porous polymer sheets that let moisture vapor pass through while blocking liquids, germs, and contaminants. The alternative to monolithic breathable films is microporous films. Both materials are designed to allow moisture vapor transmission, but they do it in different ways.

Whereas breathable films are non-porous, microporous films contain tiny pores that are small enough to block liquids but large enough to allow water vapor to pass through. The downside of microporous films is that the pores can get clogged over time by oils, dirt, or contaminants, reducing their performance. This problem is averted with breathable films.

Trusted by industry leaders, Arnitel® combines unmatched flexibility, high-temperature resistance, and top-tier mechanical properties such as rebound, fatigue resistance, and minimal creep.

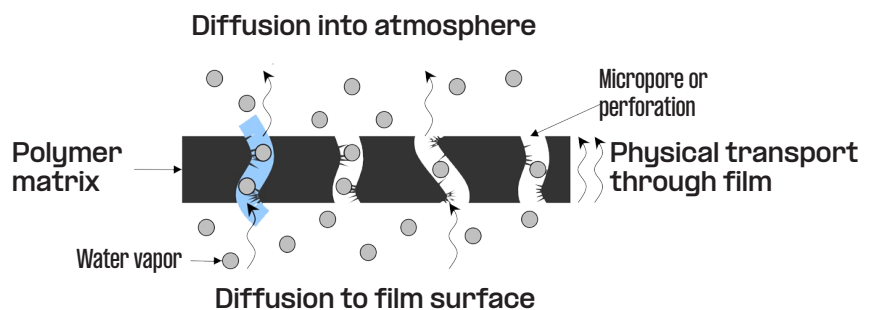
MONOLITHIC BREATHABLE FILMS

Monolithic membranes made from Arnitel® provide ultimate barrier properties. They are extremely versatile and easily tunable to moisture vapor transmission performance, without sacrificing barrier performance.



MICROPOROUS FILMS

With microporous membranes, moisture vapor transmission performance is limited, and in general, barrier properties are compromised when pushing the limits of higher moisture breathability. Microporous systems are also challenged by providing thermal insulation, odor management, mechanical performance, and processing flexibility.



House Wrap

Roofing Membranes

Sealing / Flashing Tapes

Carpet Underlayment



Arnitel® for Building & Construction

Water / weather resistive barriers (WRBs)

Arnitel® withstands wear from extreme temperatures and harsh weather to extend the life of construction materials.

Key Benefits:

- Creates an effective air barrier and provides better insulative properties than microporous solutions.
- Proven solution for moisture problems.
- Cost-effective compared to roofing membranes made from thermoplastic polyurethane.
- Better UV, heat and hydrolysis resistance.
- Flexible, strong and highly breathable.
- Reduces carbon footprint.
- Maximizes energy efficiency.

Arnitel® for Consumer Goods

PFC-Free Alternative

Arnitel® is a reliable solution for outdoor clothing and other consumer products that require breathability.

Key Benefits:

- Outperforms conventional microporous membranes, providing 100% waterproof performance to keep the wearer comfortable and dry.
- Made of 100% recyclable thermoplastic copolyester.
- Completely free of perfluorinated compound (PFC-free).
- Durable and weather resistant.
- Exceptional flexibility in design.
- High-temperature resistance and strength.
- Greener alternative to conventional solutions.



Arnitel® for Food & Product Packaging

Preserving Product Quality, Shelf Life and Safety

Arnitel® offers numerous advantages for food and product packaging, especially in preserving quality, extending shelf life, and ensuring safety.

Key Benefits:

- Balances the application-specific gas mixture of oxygen and carbon dioxide.
- Balances moisture inside the package and prevents condensation and drying out.
- Highly breathable and high-temperature resistant.
- Bio-based alternative.
- Excellent processing characteristics.





Arnitel® VT (TPC) – The Standard for Ultimate Protection

When it comes to critical, life-saving applications, Arnitel® VT stands out as the preferred choice among medical professionals. This highest-grade protective monolithic film is engineered not only for top-tier performance but also to meet the strict standards set by the Association for the Advancement of Medical Instrumentation (AAMI) and the European Standard EN13795 — giving you confidence in every application.

Designed for Demanding Medical Applications

Level 4 Medical Gowns: In high-risk settings where blocking harmful contaminants is essential, Arnitel® VT provides unmatched protection. Its unique breathability allows moisture vapor to escape, enhancing comfort for healthcare professionals during prolonged use.

Respiratory Tubing: Arnitel® VT enables high moisture vapor transmission through the tube wall, effectively preventing condensate build-up and eliminating the need for costly moisture traps. This design simplification not only reduces system costs but also enhances patient safety — minimizing “rain out” for better respiratory care.

With Arnitel® VT, you're choosing a product trusted by leading medical institutions for its life-saving capabilities and proven ability to meet rigorous standards. Join the professionals who rely on Arnitel® VT to deliver both safety and comfort in the most critical applications.

Arnitel® CARE (TPC-ET) – Trusted for Safety, Proven in the Field

When safety and reliability are non-negotiable, Arnitel® CARE is the trusted choice for leading medical device manufacturers worldwide. This medical-grade thermoplastic copolyester (TPC-ET) has a well-documented clinical history, providing confidence in its safety and efficacy across critical healthcare applications.

For critical medical devices, Arnitel® CARE is the material of choice for demanding applications, including:

Catheters: Trusted in sensitive applications where patient safety is paramount, offering flexibility, durability, and non-reactive properties.

Inhaler Valve Systems: Ensuring reliability in life-saving devices, Arnitel® CARE delivers consistent performance where it matters most.

Bio-Processing and Wound Care Films: Durable, non-absorbent, and easy to sterilize, Arnitel® CARE is ideal for single-use bio process bags, surgical tapes, and wound coverings, supporting critical care standards.



Key Medical Grades

Medical device manufacturers are working to meet rapidly growing demands for increasingly stringent measures to enhance patient safety and mitigate risk.

In this complex environment, advanced material innovation requires both an understanding of next-generation science and emerging medical industry trends.

This is why Envalior developed a portfolio of advanced material solutions known as “CARE” grades.

Compared to standard grades and food contact grades, CARE grades have additional advantages to help medical device manufacturers lower their risks. For instance, a more stringent management of change policy, medical device declarations, biocompatibility declarations, and notification of change for last-buy options.

With Envalior’s CARE grades, you join a growing community of healthcare innovators who rely on their proven performance and trusted safety record for life-saving applications. Make the choice that leading professionals trust for safety and effectiveness in the field.



Grade	Polymer	Food Contact (FDA)	ISO 10993-5 / ISO 10993-10	USP Class VI	Autoclave (120°C, 20 min)	EtO (2h, 48°C, 60% RH, 70 mbar)	Gamma Radiation (46.1–46.6 kGr)
Arnite® Care L140E	TPC	Yes	Pass	Pass	100	2	1
Arnite® Care L146E	TPC	Yes	Pass	Pass	100	2	1
Arnite® Care L155E	TPC	Yes	Pass	Pass	100	2	1
Arnite® Care L225E	TPC	Yes	Pass	Pass	100	2	1
Arnite® Care L263E	TPC	Yes	Pass	Pass	25	2	1
Arnite® Care L274E	TPC	Yes	Pass	Pass	Not recommended	2	1
Arnite® Care L345A	TPC	Yes	Pass	Pass	25	2	1
Arnite® Care T1U	PBT	Yes	Pass	Pass	Not recommended	2	1
Arnite® Care A1U	PET	Yes	Pass	Pass	Not recommended	2	1
Akulon® Care K1U	PA6	Yes	Pass	Pass	25	2	1
Akulon® Care K1G6	PA6-GF30	Yes	Pass	Pass	100	2	1
ForTii® Care P1G6	PPA-GF30	Yes	Pass	Pass	100	2	1
Novamid® Care N3U	PA6/66	Yes	Pass	Pass	100	2	1

**Actually tested to the number of cycles specified. Capability beyond is possible.*

10 UNIQUE ADVANTAGES OF ENVALIOR® MONOLITHIC FILMS

1

Unrivaled Moisture Control:

Arnitel® offers the highest moisture vapor transmission rate (MVTR) on the market, delivering superior comfort and durability in textile applications.

2

Customizable Moisture Management:

Unlike microporous membranes, Arnitel® can be tailored to provide either low swelling or high moisture absorption for optimized moisture wicking.

3

Enhanced Barrier Protection:

Acts as a reliable shield against water, chemicals, viruses, and microorganisms, ensuring safer and more comfortable protective garments.

4

Extended Shelf Life:

By balancing the gas mixture of oxygen and carbon dioxide, Arnitel® creates a controlled atmosphere for packaging, significantly prolonging the freshness of produce.

5

Superior Comfort:

With its high elasticity and soft texture, Arnitel® enhances comfort in apparel and wound care dressings, offering a better fit and feel.

6

Eco-Friendly Chemistry:

Made with clean polyester for a lower carbon footprint, Arnitel® is a more sustainable choice compared to TPU and PFC membranes. 100% polyester garments can also be recycled in stream 1.

7

Versatile Processing Options:

With a broad portfolio of tunable viscosities, Arnitel® supports various processes like blown film, cast film, and extrusion coating, enhancing manufacturing flexibility.

8

Cost-Effective Thinness:

Capable of achieving ultra-thin films (<10 microns), Arnitel® reduces material costs without sacrificing performance.

9

Co-Extrusion Compatibility:

Arnitel® is co-extrudable with PET, PBT, PVC, PA6, and TPU, enabling unique film constructions with advanced barrier properties.

10

Non-Toxic and Environmentally Friendly:

Arnitel® can be engineered to be non-toxic, making it a safe and eco-conscious choice for a variety of applications.