3M Science. Applied to Life.™

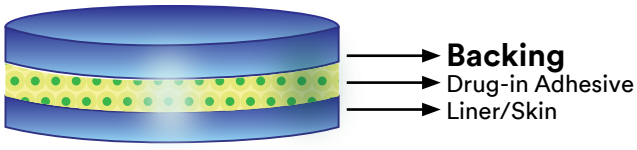
Transdermal Components– Delivering more than just medicine

To view the online catalog or request a free sample, click here.

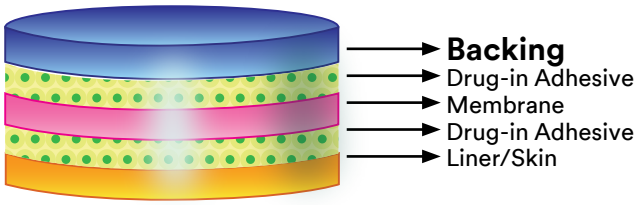
As patient preference becomes increasingly important, many companies are looking to transdermal patches to satisfy the needs of their customers. With over 35 years of transdermal experience, 3M Drug Delivery Systems is your vertically integrated partner for all of your transdermal needs, from development and scale up to a wide range of components.

Selection of the right components is one of the critical considerations when creating a transdermal patch. This eBook will guide you through some of the options to keep in mind.

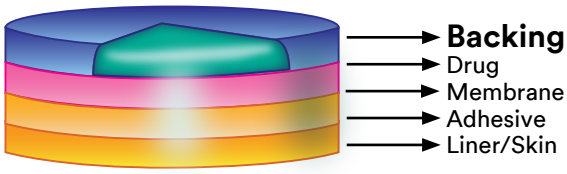
Depending on the structure of a transdermal patch, there are several basic components of a transdermal system:



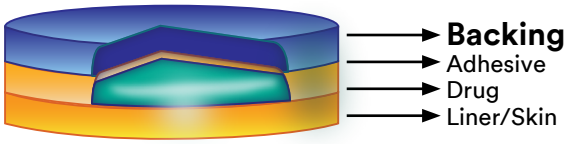
Drug-in-Adhesive



Multilaminate



Reservoir



Matrix

Backing Drug Membrane Adhesive Liner/Skin

3M Drug Delivery Systems offers a multitude of liners, backings membranes and tapes along with packaging films, allowing Pharma companies to find the best fit for their transdermal system.

To view all products and request a free sample click here.

Liners

3M offers a wide variety of components to help ensure suitability and success.

- 3M liners have the broadest capability with adhesives. 3M's liners are compatible with PIB adhesives, acrylates and silicone. 3M provides information to support registration through FDA's DMF process.

3M™ Scotchpak™ Liners: Scotchpak Fluoropolymer Coated Release Liners from 3M provide premium release from a wide variety of skin contact adhesives. Compatible with many formulations, these liners show excellent chemical stability and have long shelf life.

Did you know? As a large company with over 35 years of experience, we have built trusting relationships with our clients. In order to continue that trust, we keep an open flow of communication with our customers. For example, if we needed to make a change to our liner due to a solvent change etc., we let our customers know well in advance, (about two years) to give them ample time to test a replacement product. This way their supply chain is not set off kilter and the Pharma company has an appropriate amount of time to find a suitable replacement.

- Conducting a liner swap mid-way through production is very costly and time consuming. To prevent liner swapping, ensure the API is compatible with the chosen liner.

To learn how to properly handle 3M film rolls, contact us.

To view all products and request a free sample click here.

Backings

Important considerations when choosing a backing include occlusivity, patient comfort and cosmetic appearance. 3M offers a wide variety of backing materials to help ensure suitability, stability and a successful final product.

- Many backings also have the ability to be printed on, adding reassurance to both patients and caregivers.
- 3M offers a variety of samples in order for customers to evaluate.

3M™ Scotchpak™ Backings are conformable with excellent occlusion and barrier properties and safety profiles. Their unique construction allows different films to be combined without the use of adhesives, minimizing the potential for drug and/or excipient interactions.

3M™ CoTran™ Backings are translucent flexible materials that address skin health by increasing moisture near the skin to maintain skin hydration while allowing the skin to breathe. It is a breathable material that combines a high transmission of moisture vapor and oxygen with multi-directional stretch and strength, making them ideal for large patches and use over highly flexible body areas.

Did you know? 3M was the developer of the first seven-day wear patch.* This material is available to customers today who partner with 3M to manufacture their transdermal patch.

To view all products and request a free sample click here.

Packaging

3M Packaging Films deliver a high level of confidence, even for the most challenging applications.

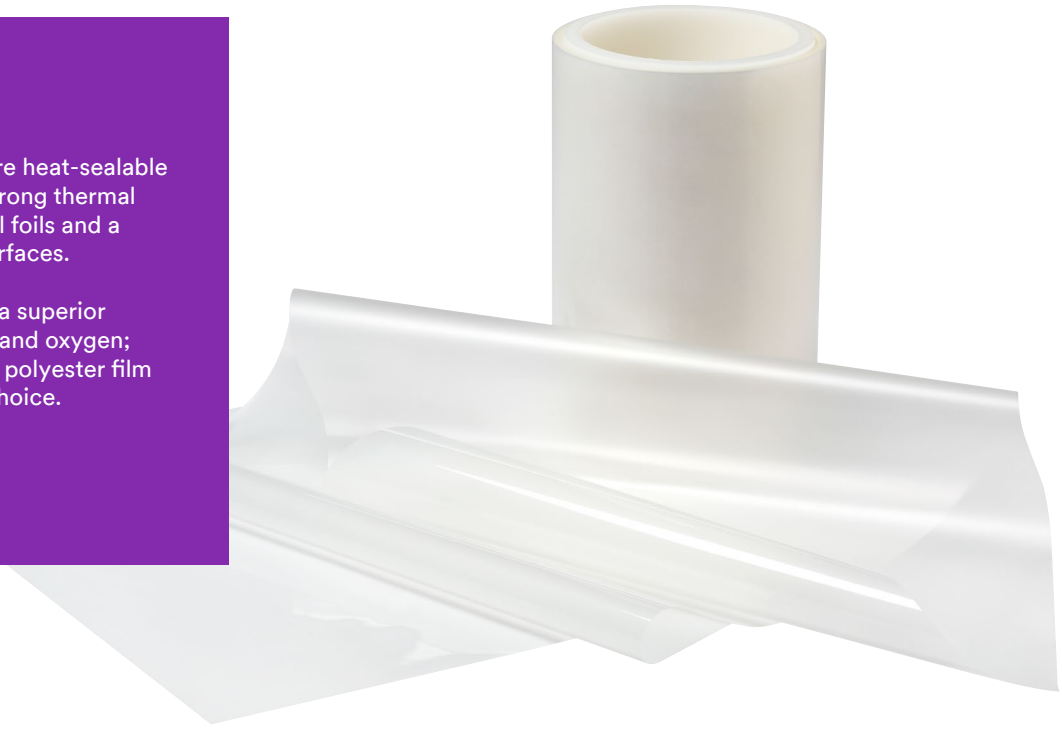
- Packaging films are provided in a roll form, for use in medical and pharmaceutical products.
- 3M offers a variety of packaging material suitable for transdermal patches. For additional information and product highlights, **go to 3M.com/ScienceofTransdermal.**

Lidding Films are translucent, heat sealable ethylene/vinyl acetate copolymer films, which provide a reliable barrier to moisture and oxygen.

Pouching Films are occlusive, heat-sealable pouching films, which provide excellent seal to polyethylene substrates.

Metal Adhesion Films are heat-sealable films, which provide a strong thermal lamination bond to metal foils and a variety of other metal surfaces.

High Barrier Films offer a superior barrier against moisture and oxygen; the occlusive, multilayer polyester film laminates are the right choice.



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Helpful Hints

Color of Patch – Clear or Opaque?

Many care givers, or patients choose an opaque back ground, so the patch is visible, therefore making it easier to remember if the medication has been administered

The color of the patch is a determining factor in the time of wear.

- For instance, if the API formulation is sensitive to light and the expected wear time is seven days, a more opaque liner is needed.
- Alternatively, if the same patch is only going to be worn for two hours and is sensitive to light, a clear liner can be used.
- If the patch is going to be worn for seven days and is sensitive to moisture, then an aluminum vapor coat backing should be used, because it won't allow moisture to penetrate in.
- However, much like the previous example, if this same patch is only to be worn for two hours, an aluminum vapor coat may not be as critical.

The duration of wear helps to prioritize this decision.

3M can help you with all your questions.

Manufacturing Speed:

Liners and backings that are able to withstand higher temperatures are able to produce larger quantities of transdermal patches at a fast rate.

- Often times, these are higher performing products, which are more costly. It is crucial to weigh demand against costs to find a balance.

Shelf Life:

It's crucial to test a patch's shelf life. To do so, test transdermal patches in different temperatures and light exposure to see how well it lasts. Companies must adequately select their liner to meet shelf life and temperature exposure requirements.

To view the online catalog or request a free sample, click here.

There are many steps in creating a transdermal patch. To avoid potential pitfalls, work with 3M, the expert in transdermal delivery, to bring your product to market. Contact 3M at 3M.com/ScienceofTransdermal to request further information or product samples.

Why You Should Partner with 3M:

Regulatory Expertise:

3M components are used in marketed products in countries worldwide. We understand the complexity and importance of meeting manufacturing standards and gaining regulatory approval in each region where your product will be registered and marketed. We will supply the material, the specifications and 3M components data packages to help streamline the regulatory approval process.

Used in marketed products around the world.

Manufacturing Capabilities:

3M is a leader in transdermal film manufacturing. Change control systems and Lean Six sigma tools ensure high quality and consistency for your product. With facilities capable of producing large volumes of films each year, we have the capacity to meet your needs.

Customer Service:

3M success is founded on world-class customer service and quality support. 3M representatives are available to help determine the right materials for your project and to help support and specific technical and quality requests.

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More questions?
Click here.