At Lubrizol LifeSciences, we apply our expertise in polymer system solutions to optimize transdermal drug delivery. Our diverse portfolio of products enables us to develop drug delivery systems that are both high-performing and reliable.

LifeSciences understands how ingredients interact with each other, and we tailor our chemistry to deliver precise functionality in transdermal products. This intimate knowledge means customers ultimately have more robust, effective products. We make it simple to enhance the reliability of your transdermal products’ performance by providing a solution composed of proven components.
Pharmaceutical TPUs and rheology modifiers as excipients for transdermal applications

With more than 50 years of experience working with specialty thermoplastic polyurethanes (TPUs) and pharmaceutical excipients, Lubrizol LifeSciences can customize the properties of films, transport membranes and hydrogels to be more effective in the transdermal delivery of active pharmaceutical ingredients (APIs).

LifeSciences produces several grades of high molecular weight polymers and ingredients for pharmaceutical products. We can formulate a customized solution to optimize the delivery of APIs in transdermal applications.

Excipient grade TPUs provide several advantageous properties, including:

- Regulated rate of API diffusion
- Good absorption properties with products like Pathway™ excipients
- These polymers offer compatibility and delivery of both hydrophobic and hydrophilic APIs

Lubrizol LifeSciences’ selection of Carbomers and Polycarbophil exipients include:

- Carbopol® Polymers: These polymers can act as a rheology modifier to suspend and disperse an API in a patch formulation.
- Pemulen™ Polymers: These polymeric emulsifiers help disperse and improve on bioavailability in a patch gel matrix.
- Noveon® AA-1 Polycarbophil: This bioadhesive polymer is often used in contact with mucous membranes to aid in retention and release of APIs.

Patch backing Layer:

- Pellethane® 5863 or Pellethane® 2363 series: These polymer platforms may be used in transdermal drug delivery systems as a backing layer to protect patches, provide comfort (high flexibility) and breathability (moisture transmission properties).

Lubrizol LifeSciences’ products demonstrate well-established biocompatibility. The safety of these products is supported by a history of over 50 years of successful use in commercial pharmaceutical drug delivery product formulations.

Whatever your needs for transdermal delivery, Lubrizol technology can help. Contact Lubrizol LifeSciences to learn more about our products and how they can help you succeed.