



DUPONT



TATE & LYLE

Nouryon



COVATION BIO|PDO

 **Grillo Zinkoxid GmbH**



3V
SIGMA

Spotlight
SkinCare Pharma

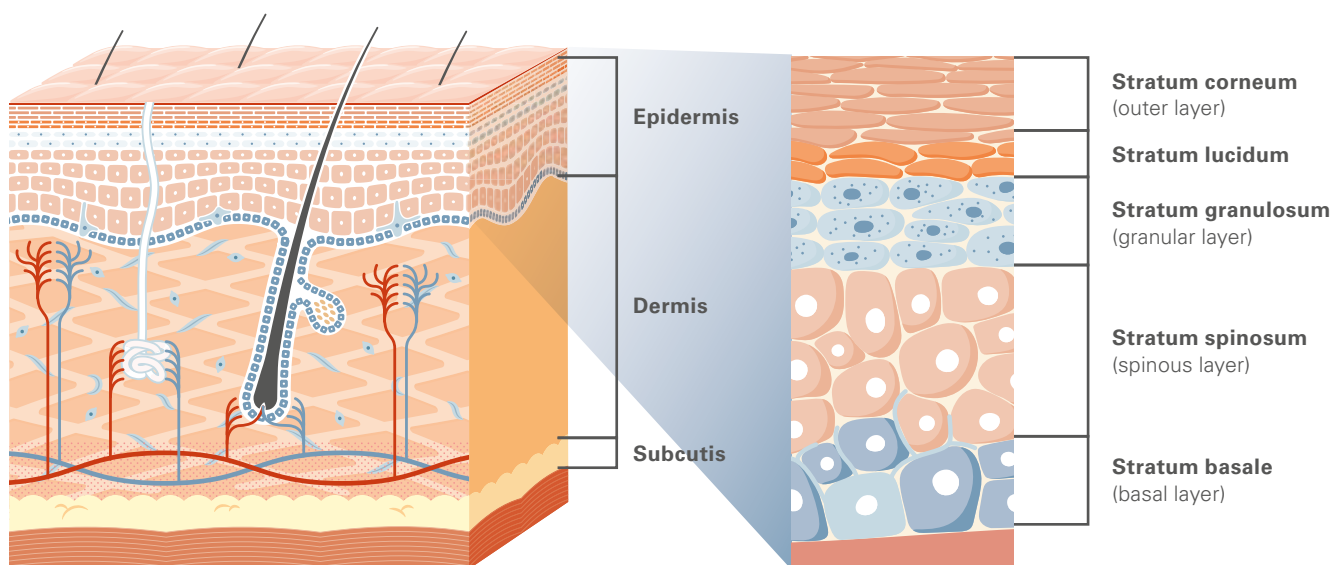
Skin and SkinCare

With an area of around 2 m² the skin is the largest organ of the human body. It performs numerous functions to maintain health and well-being. Besides its important role as a protective cover, this metabolic and sensory organ is also required for thermoregulation and water as well as electrolyte balance.

The skin cannot be replaced, so it is essential to protect and nourish it to retain its natural functions.

The skin is made of 3 basic layers: the epidermis, the dermis and the subcutis:

Layers of the epidermis



Biesterfeld 
Lab and Innovation Centre

Lab & Innovation Centre

In our Lab and Innovation Centre in Hamburg we have the possibility to support the development of tailored solutions together with our customers. We can serve different example formulations which can be a good starting point for your project. Through the addition of additives from our wide ranging portfolio also existing formulations can be enhanced.

If you have an idea for a project get in touch:

Healthcare@biesterfeld.com

Consumers are increasingly demanding a higher quality of life and are taking charge of their health and well-being. At the same time, regulations on consumer healthcare products are continually evolving to ensure safety and minimize public risk. With our topical portfolio including various raw materials from our trusted suppliers we offer highly effective solutions for treating and preventing different skin conditions.

DuPont™ Liveo™

As a global leader in silicones with more than 70 years of experience in the healthcare industry, DuPont offers solutions, expertise, quality and compliance support for your topical applications:

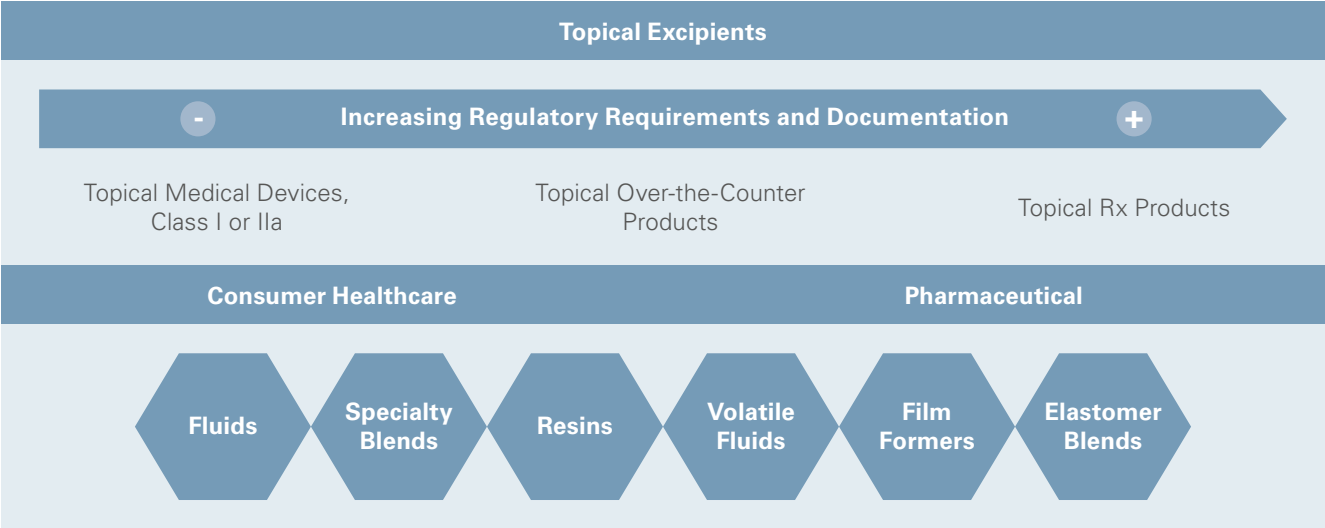
DuPont™ Liveo™ Topical Pharmaceutical Excipient product range is composed of silicone-based materials that allow you to formulate innovative solutions for consumer healthcare application and for the efficient delivery of your Active Pharmaceutical Ingredients (API) in topical forms like creams, lotions, gels, ointments, sprays or sticks.

DuPont silicone-based excipients enable unique and aesthetically appealing formulations, making your pharmaceutical finished dosage forms easier to apply and more pleasant to use, thereby helping to increase patient compliance.



Silicone / silicone blends:

- › Wash-off resistance
- › Skin protection
- › Dry, smooth feel
- › Non-greasy / non-stinging
- › High spreadability
- › Controlled release
- › Long-lasting / substantivity



Covation

Founded in 2022, in Newark, Delaware, Covation Biomaterials is a leading global innovator offering a product portfolio of high-performance, sustainable solutions. The company builds on its rich DuPont legacy of groundbreaking scientific innovation and continues to deliver novel solutions at scale across multiple industries. Covation Biomaterials produces 1,3 propanediol, from a renewable, sustainable and responsibly managed industrial dent corn feed stock. Through product lines such as Sorona®, Susterra® and Zemea®, the mission of Covation Biomaterials is to deliver a sustainable product that will enable customers to provide bio-based products accessible to everyone.



Zemea USP-NF:

- › Humectant
- › Preservative booster
- › Emollient
- › Natural solvent
- › Viscosity enhancer
- › Hand-feel modifier
- › USP-compliant

Tate & Lyle

With over 200 years' accumulated experience in the manufacturing, manipulation and application of multiple hydrocolloids, Tate & Lyle offers a deep understanding of the use of its products to provide the results customers expect from their finished product. The one Tate & Lyle Quality Standard ensures the production of safe, high-quality ingredients for our customers. The new global regulatory environment requires elevated compliance and harmonized audit procedures, and requires accountability and visibility to external parties.



Xanthan Gum:

- › Pseudoplastic rheology
- › Soluble in hot or cold water
- › Stable over a range of pH, temperatures and high concentrations of salt
- › Excellent suspension of insolubles and stability of oil droplets
- › Resistant to enzymatic degradation
- › EP-/USP-compliant

Pectin:

- › Forms gels under acid conditions
- › Binds water
- › Forms films
- › Buffers to natural skin pH
- › USP-compliant

Carrageenan:

- › Forms thermally reversible gels
- › Wide range of textures
- › Inhibits syneresis
- › Stable under neutral and alkaline conditions
- › May replace synthetics in gels and lotions
- › Gelatin alternative

Gellan Gum:

- › High gel strength
- › Excellent stability
- › Process flexibility and tolerance
- › Sparkling clarity
- › Range of textures available
- › Flexibility in melting and setting points
- › Suspension efficiency
- › USP-compliant

Nouryon

Nouryon manufactures a range of products for applications in the pharmaceutical industry. It works according to the highest international standards and continuously carries out product testing to ensure these standards are met.

Today, with sustainability and green values being the key drivers in product innovations, CEKOL® cellulose gum is a preferred choice as a bio-based and biodegradable hydrocolloid. By selecting the right raw materials and adjusting the production process steps, it is possible to tailor the functionality of specific CEKOL® grades to different applications. CEKOL® cellulose gum is a water-soluble polymer derived from wood or cotton cellulose and produced to minimum 99.5% purity. Products manufactured from wood cellulose satisfy GMO-free requirements. The product hydrates and dissolves readily in hot and cold water. By choosing the right CEKOL® type, the formulator can achieve the desired rheology for any aqueous system, including suspensions and emulsions. Besides controlling the rheology, CEKOL® cellulose gum is known for its excellent water-retaining and film-forming capacity.



Nouryon

Cekol:

- › Rheology modification
- › Film-forming
- › Water retention
- › Surface activity
- › EP-/USP-compliant

Grillo Zinkoxid GmbH

With over 100 years of experience, Grillo Zinkoxid GmbH is one of the market leaders in developing and producing zinc oxides in different qualities. As a traditional and family-owned company, Grillo offers customer-focused solutions for various uses of zinc oxides. The products are ideally suited for providing end-to-end service for customers focusing on areas of treatment such as skin and wounds.

To protect consumers, it is important to apply the most stringent standards in the production of medications. Ultra-pure, so-called pharmaceutical zinc oxide is an important additive for many medications used in human medicine.

The zinc oxide qualities from Grillo Zinkoxid GmbH are manufactured by the indirect process (French process) according to EU-GMP Guideline Part II.

They can be used in numerous pharmaceutical and cosmetic applications such as skin creams, pastes, wound dressings and sprays.



Grillo Zinkoxid GmbH

Zinc oxide:

- › Antiseptic
- › Antibacterial
- › Antimicrobial
- › Anti-inflammatory
- › Wound healing
- › Allergy-friendly
- › EP-/USP-compliant/
BP-compliant

3V Sigma

3V Sigma is an Italian multinational with over 60 years of experience. As a leading global producer of specialty chemicals, 3V Sigma offers a huge portfolio for topical applications.

The products can be used for many different pharmaceutical and healthcare applications such as oral suspensions, topical gels, sun-care creams, transdermal patches and more.

The UV absorbers protect the skin from the harmful effects of sunlight radiation and allow Sunscreen Protection Factor claims. Central to 3V Sigma is its years of experience in the development, synthesis and manufacture of polymers of acrylic acid. In fact, 3V Sigma is one of the earliest manufacturers of the homopolymers known as carbomers.



3V
SIGMA

Carbomers:

- › UV filter → protects skin
- › Rheology modifiers
- › Controlled drug release
- › EP-compliant

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Competence in Solutions

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