



Sandy-feel packaging.

New brand experiences at your fingertips.

WHITEPAPER



A close-up, low-angle shot of a person's legs in dark, possibly black, pants standing on a sandy beach. The person is wearing light-colored, possibly white, shoes. The background is a soft, out-of-focus landscape of sand dunes under a warm, golden sunset sky. The lighting is warm and directional, coming from the right, creating a strong silhouette effect on the person's legs and highlighting the texture of the sand.

Today's printing and packaging landscape is marked by strong visual branding, but brand owners all too rarely leverage the potential of providing a compelling haptic experience. This is why Covestro has rolled out **Skins®**, a series of haptic polymer coating resins. In particular, the latest of these resins, **Skins® Sandy**, can enable memorable sandy textures at new levels of functional and environmental performance.

Sand

The wonder of the outdoors

Everyone knows how relaxing the sensation of warm sand under your feet can be. An inherently natural texture that reminds us of the desert, dunes, or the beach, sand also has handcrafted associations through its relation to sandpaper, as well as the fact that the composition of any particular sample of sand is unique. It can evoke the natural roughness of exploring the outdoors, the drama of the desert, or the luxurious relaxation of beach holidays. Increasingly, sandy textures are used in e.g. food packaging like cookies or chips, packaging to remind consumers of these feelings.

In fact, sandy textures are well-placed to add value to a variety of products. For example, they can emphasize the down-to-earth feel of hiking boots or flasks, remind a consumer of beach holidays on a packet of spaghetti or bottle of wine, or add value to the packaging of holiday products such as swimwear. Sandy textures on packaging can also mimic the texture of the products inside, such as the crumbliness of biscuits or the grittiness of an exfoliator from a "natural" skincare brand. The roughness of sand adds a particularly memorable dimension to packaging, as well as providing the practical advantage of improving grip.

A touch of branding

Hi I'm
Skins® Sandy



A touch of branding

For many brand owners and marketers today, tactile elements are an increasingly important way to differentiate themselves. With the visual elements of product and packaging design now highly saturated, these brand owners are seeking to provide a more complete sensory experience.

In particular, the important role of touch in packaging differentiation is becoming more widely understood, thanks to science's increased understanding of the importance of 'haptic perception'. This is the act of exploring and identifying objects by how they feel to the touch, and is a powerful factor in consumers' decision-making around product purchases.

Indeed, 56% of shoppers that pick up a particular product will then purchase a product in that category.¹

But touch doesn't just make individual products more appealing to consumers; it also helps brands build a recognizable personality, increasing the number of familiar sensory links a customer can make to the brand.

Research has shown that appealing to more than three senses can increase brand impact by more than 70%.²

Brands are increasingly recognizing the power of these multi-sensory experiences, including luxury brands Stolichnaya Vodka, BMW, Royal Caribbean, and Truvia, which have all applied haptics to their advertising materials through various methods.

Product packaging is a particularly powerful area in which to implement these sensory experiences. Indeed, when choosing packaging materials, it is increasingly important that they not only protect or conserve the product inside, but also encourage consumers to buy it. To achieve this, paper, cardboard, plastic, and other forms of packaging can be altered to create a "haptic link" between buyer and item, by giving the packaging material a distinctive texture that represents the product it contains – such as a silky-smooth finish for luxury cosmetics, a paper-feel for artisanal products, or a rough, sandy finish for holiday- or outdoor-related products.

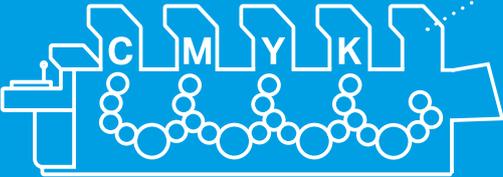
¹ CSA, 2017

² Fabrik Brands, 2019

Adding texture through coating

Production process

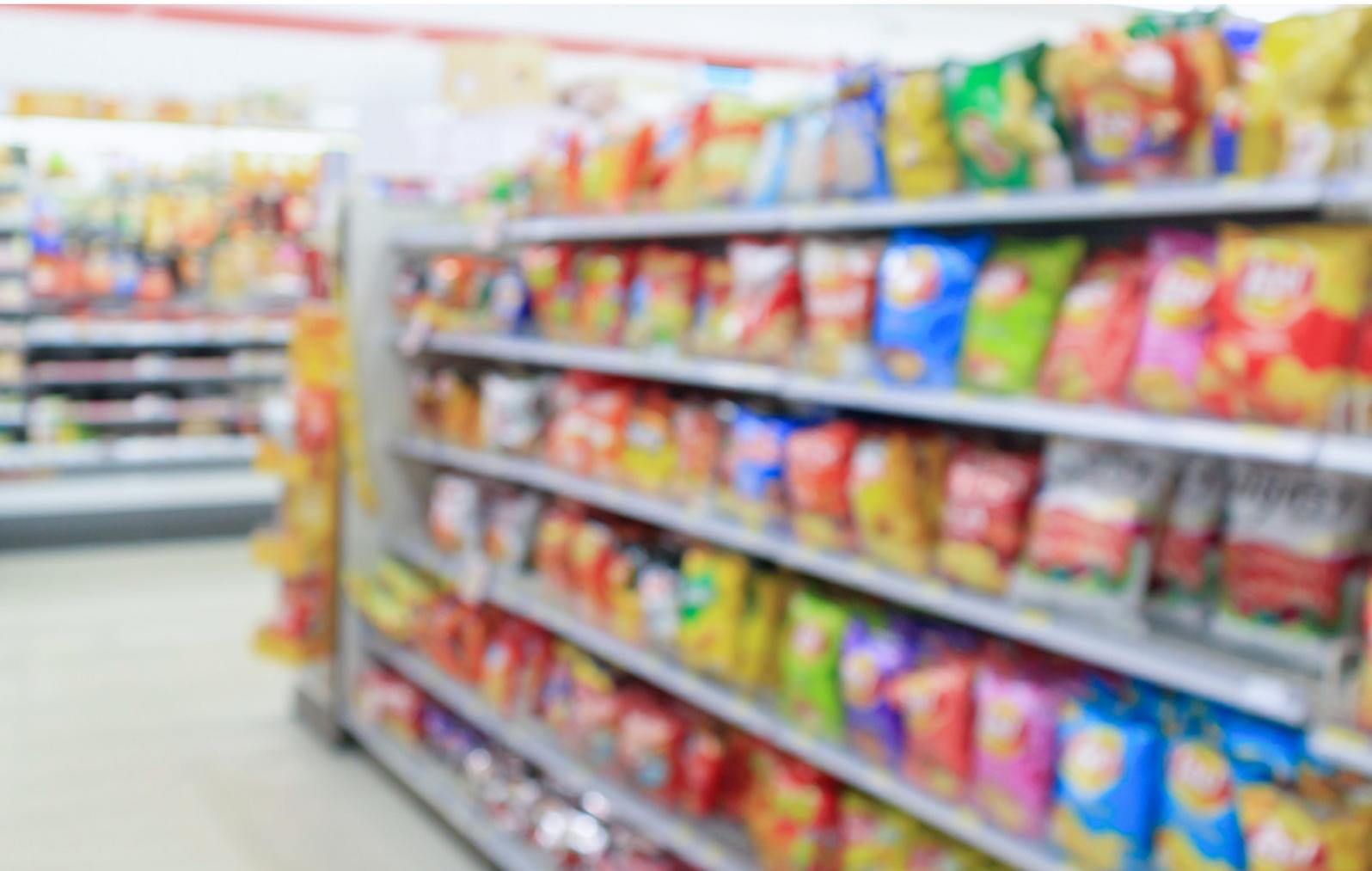
OPV



Traditionally, these tactile qualities were added to paper or packaging during the latter stages of production, through embossing or through lamination with film. However, this method is often expensive and time-consuming, limiting the items' mass-market potential. A more efficient way of implementing haptic textures is to add specially engineered coating applications to the packaging during the original production process.

This allows retailers to add personalized coating layers to generic containers to create a distinctive sensory experience. And, rather than simply using additives to alter the coating's surface quality, this alteration can be performed more effectively – and sustainably – at raw material level, through the coating resin.

As a developer of coating resins, Covestro plays a key role in providing these solutions. In particular, the **Skins®** series of haptic coating resins delivers different textures to a range of printing and packaging materials. These innovative resins can be easily applied by printers and converters, in turn increasing the options they can provide to brand owners. So far, Covestro has developed three **Skins®** resins: a silky finish for luxury cosmetics, a rubbery texture that adds functional grip and style to tech products, and a velvet finish that adds class to luxury products. All three **Skins®** have food contact compliance, so they are also ideal for food packaging.





Recreating the sensation of sand

Recreating the sensation of sand

In line with market demand for sandy-feel coatings – especially ones that can be more effectively delivered by formulators and printers – Covestro has also been working to develop a sandy-feel coating resin. To ensure it delivered a realistic sandy-feel experience, a “Skinnovation” Haptic team made up of trained Covestro employees, developed a unique ‘fingerprint’ for sandy texture. Using their own mathematical system to connect specific materials with precise user-feels, the panel mapped the haptic qualities of several materials. They analyzed and scored them based on a range of specific tactile properties, including modulus, surface roughness, coefficient of friction, and heat conductivity, and used this to optimize the coating resin’s properties to accurately recreate the haptic qualities of sand. And, to ensure the greatest possible accuracy, the new resin underwent two rounds of “feel checks”.

Feeling that functions

As well as delivering a realistic sandy texture, Covestro was well aware that the resin needed to work optimally for formulators, printers and converters – only then would these parties be able to offer the textured materials to

brand owners. In particular, the “Skinnovation” Haptic team found that the large particle size needed to create a sandy texture can present a challenge for printing processes, especially for flexo printing. They also discovered a need for a more sustainable sandy-feel system that didn’t require fillers and additives.

Indeed, most sandy-feel coatings on the market can only be achieved using complex, costly systems and printing techniques – a particularly significant obstacle to industrial production, where coatings can be applied to 10,000 packaging units every hour. To address this, Covestro collaborated with partners across the value chain, from formulation developers to the manufacturers of printing machines and their parts, to develop a high-performance sandy-feel coating resin optimized for high-volume production.

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Sandy

Ready to join the Skins® family



Sandy: Ready to join the Skins® family

Like the other **Skins®** – Silky, Rubbert, and Vel-Veeto – Covestro's new sandy-feel coating resin will be launched via a distinct cartoon-like character: Sandy. This new resin will deliver a gritty texture to all kinds of packaging, from food and drink to paper and cardboard. In keeping with the versatility of sandy textures, Sandy's effects can range from fine to grittier, depending on the application.

It will also offer strong rub and water resistance, will be compatible with a range of after-effects from gluing to hot stamping, and can be used on all kinds of substrates. Unlike most sandy-feel resins on the market, the resin will be compatible with flexo printing, as well as forward & reverse gravure, roller coating, and spray coating – opening a new world of possibilities for printers and brand owners.

Sandy won't just offer technical performance and enhance texture: in line with the 'natural' sensory experience it provides, it offers several environmental advantages compared with similar coating resins. For example, Sandy is lighter than other laminates, allowing converters to reduce material usage and save costs. It's also designed for use in waterborne applications, enabling more sustainable application techniques.

What's more, Sandy can be applied as a single coating with no additives or fillers, reducing the use of harmful chemicals. It also facilitates mono-material packaging by replacing an extra sandy-feel substrate with a coating, making it easily recyclable. These high-performance, sustainable properties will unlock many more opportunities for brand owners to create sandy-feel experiences that consumers will remember.

A good feeling about the future

When it comes to adding texture to products and packaging, a world of possibilities still lies ahead – indeed, the ultimate goal is for each brand to have its own recognizable texture that aligns with its market and target consumers, in the same way brand colors and logos do. For instance, next to Sandy the **Skins**® Family consists of Silky, Vel-Veeto and Rubbert. These **Skins**® will add the luxurious feel of silk, the classy feel of velvet or a rubbery surface to help with grip and enhances the ergonomics of design.

Above all, current development and innovation in haptic coatings is paving the way for these coatings to be more sustainable and environmentally friendly, as well as easier for formulators, printers, and converters to deliver – creating a wider range of options for brand owners, and making the world a brighter, more sensory-rich place for people and planet.



Want to learn more? Contact us

Would you like to know more about how we developed our sandy coating resin, or how it can help you create a distinctive brand experience? Our experts are on hand to advise on how a unique, tailor-made sandy-feel experience could be developed for your precise requirements.

Visit www.covestroskins.com.

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¹Please see the "Guidance on Use of Covestro Products in a Medical Application" document.
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