

We have collaborated with selected social media influencers and bloggers to help educate consumers on the many positive benefits that silicones provide in beauty products. Below were our answers from an interview conducted on the most common misconceptions that silicones receive.

The Silicone Question: correcting misconceptions and misinformation

1. Why are silicones getting such a bad rep?

Mainly due to alarmism. What is alarmism? The unnecessary excitement of fear that spreads rapidly through social media, exaggerating danger and causing inaccurate information to flourish. And really this is what makes the whole "issue" mindboggling. It began with complaints of silicones weighing down long hair in online forums. This issue was traced to the overuse of 2-in-1 type shampoos that contain very high molecular weight silicone gums in combination with cationic polymers to enhance the deposition of these gums. This then somehow snowballed into all silicones are harmful---where in reality the opposite could not be more true. In the world today ingredient transparency and education in beauty products has become the standard expectation among consumers. It is the responsibility of all parties involved from marketers, manufacturers, retailers, and influencers to collaboratively develop ingredient transparency along with quality consumer education to properly inform beauty users of which materials are safe and unsafe based on real evidence.

2. Are silicones good for sensitive skin?

Absolutely. Silicones are some of the most innocuous and gentle ingredients known to man—and woman, evidenced by nearly 70 years of research and consumer use history. Due to their incredibly low incidence of allergies, hospitals rely on silicone-based dressings for wound care. In the consumer market, over-the-counter skin protectants and silicone scar sheets are FDA-approved to prevent scarring. They are inert, non-reactive ingredients that have a proven track record of skin safety. Most of the alternatives, both natural and synthetic, do not. The usual assumption is that natural is implicitly equated with safety, and yet ironically essential oils are a quintessential example of natural ingredients laden with allergens. Even jojoba oil, ubiquitous in "sensitive" products, is a proven source of contact dermatitis and sensitization. Still, the majority of consumers are unaware that natural ingredients can cause severe reactions.

3. Do silicones clog the pores and cause acne?

Absolutely not. Claims that silicones in any form cause or worsen skin concerns have not been substantiated in any published research, nor have reports that silicones are sensitizing to or somehow "suffocate" skin. In fact, just the opposite is true which makes the misinformation difficult to

understand. Almost all of the claims about silicones being problematic for skin are apparently myths or based on anecdotal evidence. Silicones are permeable materials which means they let the skin breath. And actually silicone elastomers, due to their 3D network, in particular are used in anti-acne products because they help absorb sebum and excess oils off the T-Zone and facial areas. Many primers are based on silicone elastomers for this very reason.

4. Do they fake it by making the skin appear smoother and less-wrinkled but actually don't have any real effect?

The sensorial properties of silicones are second to none. Even consumers who know nothing about silicones can appreciate the cloud-like cushion of an elastomer or the silky feel of standard silicone materials. Why would you not want the product to feel nice upon application? Also silicones do a great job at removing the unaesthetic properties of other materials (both natural and synthetic) such as gritty powders, sticky polymers, and active ingredients.

Silicone technologies mask wrinkles and skin imperfections with their blurring and soft focus properties but it is also scientifically proven and well known within the R&D area of cosmetics that silicones enhance the delivery of actives to the skin. Many high performance skin care products are powered by silicones to help protect and boost the activity of peptides, botanical extracts, and vitamins. Think of a "protective delivery system" for your skin. The natural movement has in some ways overshadowed many science-based brands that are safe and highly efficacious. Bottom line we have to treat skin effectively. There are a lot of women out there that have eczema or other skin conditions. Only science can give that level of treatment needed.

5. Are silicones sustainable? Do they degrade in the environment?

Simply put yes. Silicones are derived from quartz (also known as sand), the second most abundant mineral on earth. In the environment silicones evaporate rapidly and degrade in air under the influence of sunlight. The small amounts that find their way into water hate it because they are so insoluble, and complete the cycle by partitioning over to soil where it will degrade by reversion back to sand. All of this has been extensively proven and contrary to some alarmism we spoke about earlier, silicones are not building up in the environment.

6. Do silicones prevent other skincare layers to penetrate the skin? (This is Drunk Elephant's logic of removing silicones)

No. Silicones are not occlusive materials. They are breathable film forming materials which allow other ingredients, such as actives, to penetrate the skin more effectively. By design silicone elastomers are used in skin care products to enhance skin delivery----and this is all backed by published, publicly available scientific research.

7. Is it tricking your skin to feeling moisturized and not actually doing anything?

One misconception we have heard is that silicones are drying on the skin. Again the complete opposite is true. Silicones are one of the very few actives used in wound, scar and even burn creams to form a

protective barrier to prevent trans epidermal water loss. This is such an important area that people, including children that sustain life threatening skin injuries, including burns, are treated in hospital with silicone sheets and later with silicone based therapies because it lowers the chance of infection, retains moisture in the damaged skin and never ever irritates the skin.

8. Are there any other ingredients like silicone that doesn't deserve the bad reputation?

The internet is full of alarmism. Toxicology is basically a completely misunderstood field and this topic can take hours to cover and is easy to misrepresent. The best example is Dihydrogen oxide gas. It is deadly when someone breaths it for too long, but it's used in most cosmetics and no one wants to ban it. I'm talking about water! See how easy it is to mislead people with science sounding stuff that's made scary if misunderstood.

9. Is it safe? (link to clean beauty standards)

The Clean Beauty movement is all about ingredient safety over ingredient origin, incorporating both natural and synthetic materials. In reality what is safer for your skin than an inert, non-reactive ingredient that aids in the aesthetics of formulas by providing incredible sensorial aspects without irritating the skin? Case in point: silicones. Because they're never animal-derived, they are vegan and cruelty-free by default. Their palm-free status, meanwhile, alleviates any concern about whether a product contains unsustainable or unethically sourced palm derivatives. Finally, silicones are GMO-free, colorless, odorless and non-ionic, with no oxidation issues. The new Clean Beauty movement needs to understand and prioritize safety and efficacy, and not just all-natural claims. At Grant Industries we are dedicated to offering ingredients that are safe for consumer use. Our goal is to help educate the beauty world on the positive benefits that silicones and other materials provide based on actual science.

Please visit <u>www.grantinc.com/cleanbeauty</u> for more information as well as on IG.

