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# Silicone Print Technology Shake-Up Announced by General Silicones

## *Putting Away the Constraints of Silicone Silkscreen and Pad Printing*

***Hsinchu, Taiwan, January 26, 2021 -*** Experienced silicone product maker, General Silicones (GS), is proud to share how its ***Compo-SiL®*** technology creates a new method for [silicone printing](https://www.compo-sil.com/modules/news/article.php?storyid=68#utm_source=Global_PR&utm_medium=PR_link&utm_campaign=TECHNOLOGY_Printing). So far, printing on silicone is constrained by the low wettability of silicone. Only silicone-based inks adhere to silicone base material without additional costly pre-treatment methods. Even so, printing is limited and constrained by silicone ink's properties and technical challenges.

Some manufacturers chose to use electrical corona discharge, flame treatment, cold gas plasma, and ultraviolet irradiation as pre-treatment methods to bond with silicone. Those treatments are hard to control; excessive oxidization can affect downstream product assembly and aging of the treated surfaces. The costs and limitations of such treatments make them only a viable solution under specific circumstances.

### Limitations of Silicone Ink Printing

As traditional solvent-based inks easily rub off from silicone, manufacturers must use silicone-based ink. Silicone ink tends to stick to the printing pad, making the printing process labor-intensive, as regular cleaning is needed to keep printing quality. As silicone ink does not dry out like solvent-based ink, it requires baking in an oven to cure. Therefore, multicolor printing demands separate time and labor-intensive runs for each color, leading to increased cost and a slowdown of product delivery. Using screen-printing techniques with silicone ink makes achieving efficient mass production even harder.

### *Compo-SiL®* Silicone Rubber Allows Digital Printing and Mass Production

With ***Compo-SiL®*** Silicone Rubber's introduction, General Silicones offers brands and manufacturers a new, mass production friendly solution. ***Compo-SiL®*** ships as rolls of transparent/colorful printable silicone rubber sheets with a unique modified PU layer on the silicone. Internal test by GS demonstrated that the bonds created between silicone, modified PU layer, and base material are so strong that they go beyond the silicone rubber's point of failure.

The modified PU layer of ***Compo-SiL®*** provides the surface for digital printing using standard PU compatible inks. Using existing equipment, manufacturers can digitally print on the PU layer without the need for modification of their production processes. If appropriate, the printed PU side of the ***Compo-SiL®*** silicone rubber is used in roll-to-roll production to achieve textile binding and lamination utilizing HMA adhesives. As the silicone top layer acts as a shield, the print will take advantage of silicone's various properties. The silicone layer protects the ink from degradation through UV radiation, water, external chemicals, and mechanical exposure.

### Opening Silicone Rubber as Material in New Industries

***Compo-SiL®*** is easy to ship, store, and integrate into existing mass production processes, making it an attractive new material for existing and new industries.

The rapidly growing wearable and printable electronics industries need flexible and stretchable materials. Skin-friendly sensors and drug delivery systems can be printed with bio-compatible inks on ***Compo-SiL®*** made of medical-grade silicone. Designer clothing and fashion brands can take advantage that ***Compo-SiL®*** allows for large scale roll-to-roll processing.

The ability to ship ***Compo-SiL®*** with various textures like wood or abstract shapes opens the use for decoration inside cars or exposed locations on cruise ships and yachts.

***Compo-SiL®*** is available with different thicknesses ranging from 0.1 mm to 0.4 mm, and width up to 1400 mm at almost any length. Customers can request custom thickness and texture according to their requirements.

Sourcing managers and manufacturers can contact the sales team of General Silicones at compo-sil@gsweb.com.tw for more information or visit [www.compo-sil.com](http://www.compo-sil.com/#utm_source=Global_PR&utm_medium=PR_link&utm_campaign=TECHNOLOGY_Printing)

### About General Silicones

General Silicones (GS) was founded in 1970 in Taipei, Taiwan, and is now represented worldwide – including Europe, China, Japan, and South-East Asian countries. GS is a major distributor of silicone materials and an active silicone products manufacturer with ISO 9001, IATF 16949, and ISO 14001 certifications. The company has manufacturing plants in Hsinchu, Taiwan; Wujiang, China; and Bac Giang, Vietnam. With decades of experience in this field, GS has the ability and capacity to provide a wide range of silicone products for many industries, including medical, automobile, consumer products, electronics, and IT. GS listed on Taiwan's Emerging Stock Market in 2011 (TPEx: 4730). For more information about GS, please visit [www.generalsilicones.com](http://www.generalsilicones.com#utm_source=Global_PR&utm_medium=PR_link&utm_campaign=TECHNOLOGY_Printing). For more information on ***Compo-SiL®***, please visit [www.compo-sil.com](http://www.compo-sil.com/#utm_source=Global_PR&utm_medium=PR_link&utm_campaign=TECHNOLOGY_Printing)