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# Membrane Keypad Manufacturing Transformed with Compo-SiL® Decorative Film

## *Silicone Film Technology Allows for Seamless In-Mold Decoration*

**Hsinchu, Taiwan, July 2nd, 2024** - General Silicones Co., Ltd. (GS), renowned for its comprehensive silicone solutions, announces an innovative application of its Compo-SiL® decorative film in the production of membrane keypads. GS introduces enhanced design flexibility, improved durability, and superior hygiene into keypad manufacturing by integrating this sophisticated silicone film with in-mold decoration processes. Demonstrating the practicality and effectiveness of Compo-SiL® silicone technology, GS has developed reference prototypes to aid manufacturers and brands in evaluating the benefits silicone surfaces can bring to their keypad product lines.

### Benefits of Compo-SiL® Silicone Decorative Film for Membrane Keypads

The integration of Compo-SiL® into the manufacturing of [membrane keypads](https://www.compo-sil.com/application/imd-omd-applied-material/) utilizes its distinctive adhesion and bonding technology, allowing direct incorporation of silicone-based decorative film during the molding process. This seamless fusion with materials like PC and PET not only enriches surface functionality but also brings the possibility of backlit features to life, significantly enhancing user interface design. The inherent properties of silicone—resistance to hydrolysis, high temperatures, weather conditions, UV light, and water repellent—ensure the keypad surface remains robust for indoor and outdoor use in demanding environments.

For companies emphasizing sustainability, Compo-SiL® emerges as an environmentally conscious choice over materials like PC. The lower environmental footprint of silicone and the absence of VOC emissions present an intriguing alternative to traditional materials such as PC and PVC.

The [decorative film](https://www.compo-sil.com/product/decorative-film/) from Compo-SiL® comes in an array of aesthetic finishes and colors, offering designers a broad spectrum of creative possibilities. With the option for digital printing, customization extends to accommodate diverse surface designs according to specific project requirements.

Beyond visual appeal, Compo-SiL® decorative film excels in tactile quality, providing a range of textures from metallic and matte to 3D pearl lines, leather, and wood finishes. This versatility ensures an enhanced touch experience compared to conventional materials, making it an ideal choice for applications requiring tactile interaction, including touchscreen films.

### Membrane Keypads Solutions for Healthcare Devices

The exceptional chemical inertness of silicone positions Compo-SiL® as a prime material for healthcare devices necessating regular sterilization and cleaning. Its resilience against degradation from frequent cleaning with alcohol, disinfectants, and UV sterilization ensures lasting durability. Additionally, incorporating antimicrobial, antifungal, and antiviral components within silicone allows manufacturers to enhance the benefits of their devices. Compo-SiL® has met stringent industry standards, successfully passing ISO 22196:2011, JIS Z 2801:2012 antibacterial testing, ASTMG21 antifungal testing and ISO 21702:2019 antiviral testing. This validation underscores its suitability as the preferred surface material for membrane keypads in critical medical applications, such as patient monitoring systems and medical diagnostic devices, where hygiene and durability are paramount.

### Alternative Use Cases of Compo-SiL® Decorative Film for In-Mold Decoration

The application of Compo-SiL® decorative film extends well beyond the realm of membrane keypads, marking its presence across a diverse array of industries including automotive, medical, and consumer products. Its adaptability is showcased in automotive interiors, medical control interfaces, and touch control panels for home appliances, bringing aesthetic fluidity and enhanced tactile response to a multitude of surfaces.

### Exploring Compo-SiL® Potential Across Industries:

* **Automotive:** Enriches interior aesthetics with applications in trim, door panels, dashboards, center consoles, and more, elevating the user experience with sophisticated touchscreen panels and decorative lighting components.
* **Medical:** Provides reliable solutions for hospital control panels, bedside controls, patient monitoring devices, and wearable technology, ensuring cleanability and durability in sensitive environments.
* **Consumer Products:** Enhances the functionality and appeal of home appliance panels, offering intuitive touch control interfaces that blend seamlessly with modern home aesthetics.
* **Human Machine Interface (HMI):** Empowers innovative [HMI](https://www.compo-sil.com/application/human-machine-interface/) designs with backlit capabilities and clear touch buttons, optimizing user interaction across various devices.

Integrating digital printing and customizable textures, along with Compo-SiL®'s commitment to environmental sustainability and reduced VOC emissions, establishes it as an ideal choice for brands and OEM manufacturers aiming to infuse their product lines with innovation. This versatile decorative film meets the evolving demands of modern manufacturing and aligns with global sustainability goals, making it a forward-thinking choice for future projects.

For more information, contact the Compo-SiL® sales team at compo-sil@gsweb.com.tw or visit [www.compo-sil.com](http://www.compo-sil.com/).

### About General Silicones

General Silicones (GS) was founded in 1970 in Taiwan and is now represented worldwide – including in 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, GS provides a wide range of silicone products for many industries, including medical, automobile, consumer products, electronics, and IT. For more information about GS, please visit [www.generalsilicones.com](http://www.generalsilicones.com/). For more information on Compo-SiL®, please visit [www.compo-sil.com](http://www.compo-sil.com/).