



# SILICONE GELS

FOR ADVANCED  
WOUND AND  
SCAR CARE



**MOMENTIVE®**

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## **Innovative Materials with both the Patient & Manufacturer in Mind**

The health care industry is faced with a growing challenge to develop products that offer improved properties for patient care and adherence to the highest clinical standards, while at the same time being more cost effective to produce.

As a leading provider of silicones to the medical field, Momentive Performance Materials Inc. has a long history of providing innovative material solutions that help solve the toughest manufacturing challenges. Momentive's silicone gels offer high, yet atraumatic, adhesion to skin with biocompatibility, as well as opportunities for improved production efficiencies, making them excellent candidates to consider for advanced wound care applications.



## **Silicones that Enable Advanced Wound & Scar Care Product Designs**

Momentive's Silopren™ silicone gel product family is inherently water vapor and gas permeable, and thus able to promote wound healing through moisture transport.

The Silopren silicone gel family can also provide wound care products with strong skin adhesion, as well as allow atraumatic removal, which is especially critical for fragile skin, such as that of many elderly patients.

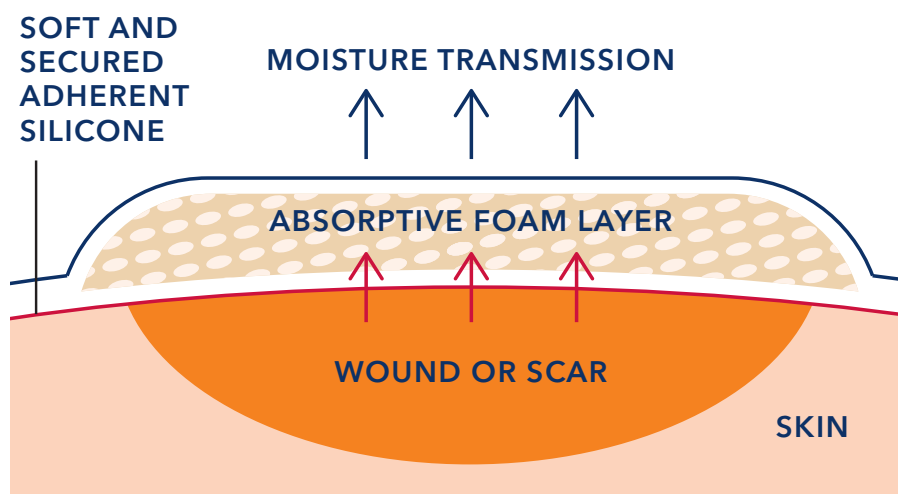
Silopren silicone gels also offer excellent benefits to products that are repeatedly applied to and removed from patients, as wound dressings utilizing Silopren silicone gel are able to be repositioned. Additionally, Silopren silicone gels offer high tack, which can allow for manufacture of wound care dressings with lower silicone coat weights, and in turn improve production efficiencies.

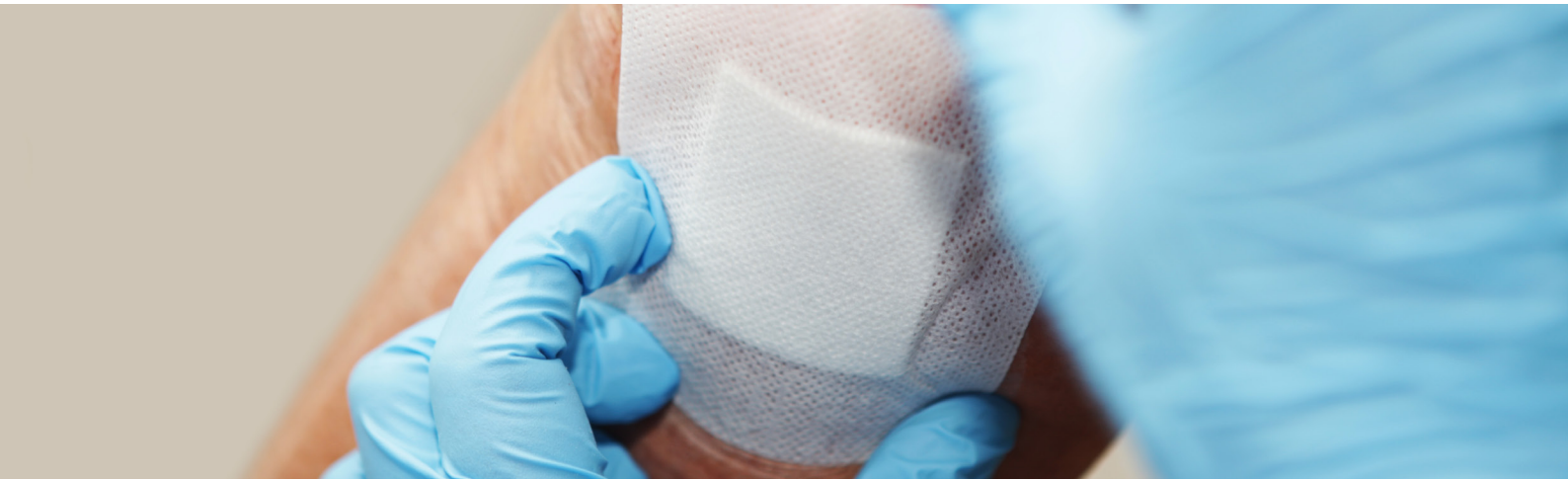
The Silopren silicone gel product portfolio of candidates for the advanced wound care applications consists of kit matched, addition-cure, two-component (1:1 mix ratio) transparent silicone rubber gels that are formulated without solvents and compatible with most coating processes.

MOMENTIVE'S  
WOUND CARE  
SILICONES ARE  
HYDROPHOBIC  
AND DO NOT  
SUPPORT  
MICROBIAL  
GROWTH

As a component in a wound care product, the silicone contact layer forms a gentle bond or seal between dressing and skin around the wound, offering an immediate and stable adhesion profile. Momentive Silopren Gels are gentle upon removal from skin and/or repositioning, unlike typical acrylic adhesives that progressively increase in adhesion over time, which can result in damage to the wound bed and skin upon removal and/or repositioning.

In contrast to commonly used adhesives, silicone gels protect the healthy tissue surrounding the wound from exposure to exudate. This stems from the improved sealing properties of silicone gels through multiple adhesion points beyond the top layer of skin (improved wetting properties). At the same time, silicone gels still allows for more gentle and painless removal of the wound dressing.





### **Product Description**

Silopren Gel 4950 and Silopren Gel 4970 are kit matched, solventless, clear, two-component silicone gel formulations. The addition-cured soft self-adhesive silicone gels is generally used for healthcare device applications or applications where adhesion to skin is needed. With its lower adhesion levels and higher cohesion Silopren Gel 4900 is recommended for applications in scar care (e.g., silicone gel sheets), while the higher adhering Silopren Gels 4950 & 4970 are recommended for (advanced) wound care and ostomy care applications, where they enable secure adhesion of the wound dressing or medical device to skin.

### **Key Features and Typical Benefits**

- Clear appearance
- Strong adhesion to skin
- Atraumatic removal
- Reposition capability
- Applicable clinical and biocompatibility testing credentials
- Solvent-free formulation
- Compatibility with a wide array of substrates, including polyurethane, open knit and perforated films

### **Processing / Curing**

Combine Part A : Part B in a 1:1 ratio prior to use. Airless mixing, metering, or dispensing equipment is recommended for production operations. Remove air entrapped during mixing by common vacuum deaeration procedures.

Curing begins after mixing at room temperature. Additional heating accelerates the cure speed. Proper cure of Silopren Gel 4900/4950/4970 requires a clean, dry surface. Certain materials will cause inhibition, including sulfur cured organic rubbers, latex, chlorinated rubbers, some RTV silicones and untreated residues of some curing agents.



Product Name	Viscosity at 20°C	Working time at 23 °C <sup>(1)</sup>	Penetration <sup>(2)</sup>	Peel Force on Bristol Paper <sup>(3)</sup>	Biocompatibility & Clinical Testing Certifications
Silopren Gel 4900	<b>A-Component</b> 950 mPas  <b>B-Component</b> 650 mPas	180 min	95 mm/10	0.9 N/25 mm	<b>Cytotoxicity</b> <ul style="list-style-type: none"> <li>Agar Diffusion (ISO 10993-5)</li> <li>MEM Elution (ISO 10993-5)</li> </ul> <b>USP Class VI &amp; ISO 10993 (6, 10 &amp; 11)</b> <ul style="list-style-type: none"> <li>Systemic toxicity</li> <li>Intracutaneous toxicity</li> <li>Implantation (14 days)</li> </ul> <b>Clinical Testing</b> <ul style="list-style-type: none"> <li>HRIPT (Human Repeated Insult Patch Test)</li> <li>CIT (Cumulative Irritation Test - 14 days)</li> </ul>
Silopren Gel 4950	<b>A-Component</b> 10,000 mPas  <b>B-Component</b> 9,000 mPas	180 min	135 mm/10	1.7 N/25 mm	<b>Cytotoxicity</b> <ul style="list-style-type: none"> <li>Agar Diffusion (ISO 10993-5)</li> <li>MEM Elution (ISO 10993-5)</li> </ul> <b>USP Class VI &amp; ISO 10993 (6, 10 &amp; 11)</b> <ul style="list-style-type: none"> <li>Systemic toxicity</li> <li>Intracutaneous toxicity</li> <li>Implantation (14 days)</li> </ul> <b>Clinical Testing</b> <ul style="list-style-type: none"> <li>HRIPT (Human Repeated Insult Patch Test)</li> <li>CIT (Cumulative Irritation Test - 14 days)</li> </ul>
Silopren Gel 4970	<b>A-Component</b> 35,000 mPas  <b>B-Component</b> 27,000 mPas	100 min	195 mm/10	3.4 N/25 mm	<b>Cytotoxicity</b> <ul style="list-style-type: none"> <li>Agar Diffusion (ISO 10993-5)</li> <li>MEM Elution (ISO 10993-5)</li> </ul> <b>USP Class VI &amp; ISO 10993 (6, 10 &amp; 11)<sup>(4)</sup></b> <ul style="list-style-type: none"> <li>Systemic toxicity</li> <li>Intracutaneous toxicity</li> <li>Implantation (14 days)</li> </ul> <b>Clinical Testing</b> <ul style="list-style-type: none"> <li>HRIPT (Human Repeated Insult Patch Test)</li> <li>CIT (Cumulative Irritation Test - 14 days)<sup>(4)</sup></li> </ul>

(1) Each 10 degree increase in ambient temperature reduces the working time approximately by half.

(2) Cured for 60 minutes at 110 °C; hollow cone; 62.5 gr, 60 sec.

(3) Internal test method: 180° Peel-off Test; bristol paper as substrate; thickness ca. 150 µm.

(4) Testing in progress, final results pending.

Typical properties are average data and are not to be used as or to develop specifications.



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