

Topical silicone solutions for ostomy care

Formulate topical barrier film and adhesive removal products for ostomy patients



Ostomy care products that are gentle, effective, pleasant-feeling and easy to use encourage patients to take better care of the skin around their stoma. When properly treated, the skin stays healthier and the patient experiences less discomfort, making life with an ostomy a more positive experience.

Silicone technologies, formulation expertise and regulatory support from DuPont can help you accelerate the development and approval of ostomy care topical solutions that meet patients' needs for comfort, convenience and protection.

Begin with ready-to-use silicone blends from DuPont™ Liveo™

DuPont has used its expertise in formulating silicone-based materials for topical applications to bring you a series of pre-blended topical silicone solutions suitable for use in ostomy care products:

- Liveo™ MG-2107 Silicone Blend and Liveo™ MG-2110 Silicone Blend for skin barrier products
- Liveo™ MG-2001 Silicone Blend for adhesive removal products

These proven, ready-to-use blends can help you reduce formulating steps and mitigate volatile-handling challenges encountered in manufacturing. Additionally, their quick-drying, non-tacky, non-occlusive nature combined with their pleasurable silicone feel can help you create products that increase patient comfort and compliance.

Solutions from a globally recognized leader in silicone-based healthcare material innovation

- Proven silicone technology for medical product development
- Ready-to-use silicone blends to accelerate your formulation development
- Breathable film-formers with good wash-off resistance for skin barrier properties
- An efficient, non-stinging cleaning agent for adhesive removal
- A level of efficacy that contributes to patient compliance
- Formulation, regulatory and product development expertise and support

Topical silicone blends for ostomy care applications

Clear, colorless and low-viscosity, these 100% silicone blends can be used as bases for topical sprays or wipes. Due to their high volatility, they also are useful as carrier solvents for topical sprays.

Silicone blends for skin barrier products

INCI Name: Disiloxane (and) Trisiloxane (and) Trimethylsiloxysilicate (Note: INCI Name is the same for both products.)

Product	Composition		Benefits
	Ingredients	% w/w	
Liveo™ MG-2107 Silicone Blend	Hexamethyldisiloxane	73	<ul style="list-style-type: none"> • Quick drying time for easy application • Provide a film on the skin with low-tack, substantive and non-occlusive properties
	Octamethyltrisiloxane	20	
	Trimethylsiloxysilicate	7	
Liveo™ MG-2110 Silicone Blend	Hexamethyldisiloxane	70	<ul style="list-style-type: none"> • Good wash-off resistance • Low odor compared to organic solvent
	Octamethyltrisiloxane	20	
	Trimethylsiloxysilicate	10	

Performance testing summary

The performance of Liveo™ MG-2107 Silicone Blend and Liveo™ MG-2110 Silicone Blend was compared to the performance of a commercial benchmark product¹.

Film substantivity – The Liveo™ silicone blends and the benchmark all exhibited good substantivity over time (Figure 1) and good wash resistance (Figure 2).

Tackiness – Liveo™ MG-2107 Silicone Blend exhibited lower tackiness than the benchmark (Figure 3).

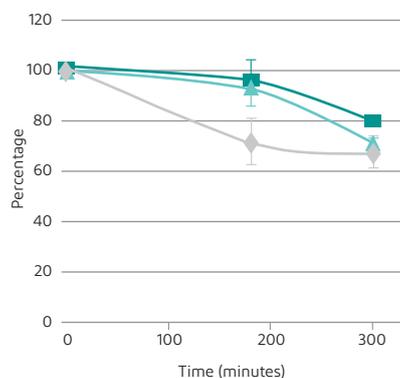
Drying time – Both of the Liveo™ silicone blends exhibited comparable drying time to the benchmark (Figure 4).

Perceived film presence – Each of the Liveo™ silicone blends exhibited a higher film presence than the benchmark.

Non-occlusivity/breathability – The Liveo™ silicone blends and the benchmark demonstrated non-occlusive properties, which allow the skin to breathe.

Illustrative test results

Figure 1: Substantivity versus time



■ Liveo™ MG-2107 Silicone Blend
▲ Liveo™ MG-2110 Silicone Blend
◆ Commercial Benchmark¹

Figure 2: Substantivity versus washes

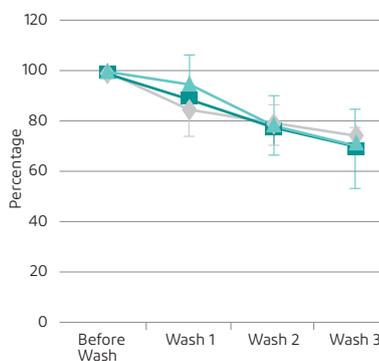
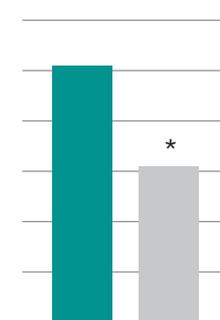


Figure 3: Tackiness

Sensory panel comparison test



*Significant difference at 95%

■ Liveo™ MG-2107 Silicone Blend
■ Commercial Benchmark¹

Figure 4: Skin barrier drying time

Product	Drying Time (seconds)
Liveo™ MG-2107 Silicone Blend	8.60 (±3)
Liveo™ MG-2110 Silicone Blend	10.87 (±4.8)
Commercial Benchmark ¹	8.75 (±3.84)

¹Benchmark ingredients: Hexamethyldisiloxane, isooctane, acrylate terpolymer, polyphenylmethylsiloxane.

Silicone blend for adhesive removal products

INCI Name: Disiloxane (and) Trisiloxane (and) Dimethicone

Product	Composition		Benefits
	Ingredients	% w/w	
Liveo™ MG-2001 Silicone Blend	Hexamethyldisiloxane	94	<ul style="list-style-type: none"> • Offers excellent cleaning ability coupled with quick drying time and skin protection¹ • Non-occlusive • Non-stinging with a silky smooth after-feel • Low odor compared to organic solvent
	Octamethyltrisiloxane	5	
	Dimethicone NF	1	

¹Dimethicone NF meets the requirements as skin protectant for over-the-counter human drug products (FDA monograph 21 CFR, Part 347.1).

Performance testing summary

The performance of Liveo™ MG-2001 Silicone Blend was compared to the performance of a European commercial benchmark product² and a U.S. commercial benchmark product³.

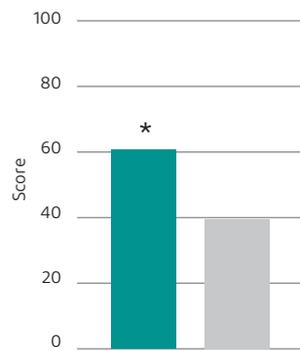
Cleaning efficiency – Liveo™ MG-2001 Silicone Blend performed better than the European commercial benchmark (Figure 5).

Drying time – Liveo™ MG-2001 Silicone Blend dried significantly faster than either the European commercial benchmark or the U.S. benchmark (Figure 6).

Sensory profile – Compared to the European benchmark and the U.S. benchmark, Liveo™ MG-2001 Silicone Blend exhibited less film residue, less greasiness and less tackiness. (See European commercial benchmark comparison, Figure 7.)

Figure 5: Cleaning efficiency

Sensory panel comparison test



*Significant difference at 95%

■ Liveo™ MG-2001 Silicone Blend
 ■ EU Commercial Benchmark²

Figure 6: Adhesive removal drying time

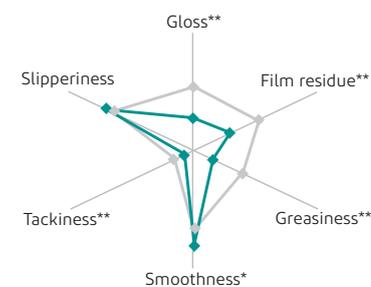
Product	Drying Time (seconds)
Liveo™ MG-2001 Silicone Blend	8.10 (±3)
EU Commercial Benchmark ²	41.72 (±10)
U.S. Commercial Benchmark ³	16.36 (±4)

²European benchmark ingredients: Isododecane, paraffinum liquidum, hexyldodecanol.

³U.S. benchmark ingredients: C10-11 isoparaffin, isopropyl alcohol, dipropylene glycol methyl ether, aloe extract, fragrance.

Figure 7: Sensory evaluation after absorption

Sensory panel comparison test



*Significant difference at 95%

**Significant difference at 99%

■ Liveo™ MG-2001 Silicone Blend
 ■ EU Commercial Benchmark²

Make DuPont your innovation leader

With more than 70 years of healthcare market experience in the design of silicone-based systems, you can rely on DuPont for:

- A reliable global supply of reputable, cost-effective silicone-based topical ingredients manufactured specifically for healthcare applications
- Proven aesthetics and functional film characteristics, such as breathability and substantivity
- Test data to support specific claims
- Formulation, regulatory and product development expertise and support
- A regulatory information package aligned with the requirements of the consumer healthcare market



To learn more about DuPont's healthcare solutions visit:
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