

# DuPont™ Liveo™ Silicone Elastomer Blends

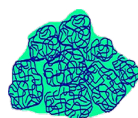
Give your formulations sensory and drug delivery flexibility

Liveo™ Silicone Elastomer Blends are specialty silicone products that offer multifunctional benefits to formulations, including a unique smooth feel, effective delivery of actives and a mattifying effect. They also are non-occlusive to semi-occlusive to moisture, depending on their composition, and they enable rheological modification to formulations.

Topical formulations based on Liveo™ Silicone Elastomer Blend technology show good drug delivery capability, which has been demonstrated experimentally with the release of model drugs.

## Silicone elastomer technology

Liveo™ Silicone Elastomer Blends are swollen and dispersed crosslinked polydimethylsiloxane (PDMS) balls in a volatile or non-volatile fluid.



Elastomeric network swollen with carrier fluid.



## Liveo™ Silicone Elastomer Blend product portfolio

Specification writers: These values are not intended for use in preparing specifications. Please contact your local Liveo™ representative prior to writing specifications on these products.

|                           | Liveo™ TE-9320 Silicone Elastomer Blend <sup>(1)</sup> | Liveo™ TE-9330 Silicone Elastomer Blend <sup>(1)</sup> |
|---------------------------|--------------------------------------------------------|--------------------------------------------------------|
| <b>INCI name</b>          | Dimethicone and Dimethicone Crosspolymer               | Dimethicone and Dimethicone Crosspolymer               |
| <b>Carrier fluid</b>      | Dimethicone, 2 cSt                                     | Dimethicone, 5 cSt                                     |
| <b>Carrier volatility</b> | Volatile                                               | Non-volatile                                           |
| <b>Solid content, %</b>   | ~15                                                    | N/A                                                    |
| <b>D4, %</b>              | <0.1                                                   | <0.1                                                   |
| <b>D5, %</b>              | <0.1                                                   | <0.1                                                   |
| <b>D6, %</b>              | <0.1                                                   | <0.1                                                   |

<sup>(1)</sup>New development with low cyclosiloxane content. Has been designed to meet the substance of very high concern (SVHC) threshold for concerned cyclosiloxanes (below 0.1%) proposed by REACH regulation (EC) No 1907/2006.

## Key benefits

- Smooth skin feel
- Form a non-tacky film on skin
- Thickening agent for anhydrous and water-in-oil emulsions
- Non-occlusive to semi-occlusive to moisture, depending on carrier fluid
- Easy to formulate in topical forms

## Special features and properties

- Sensorial benefits

## Applications

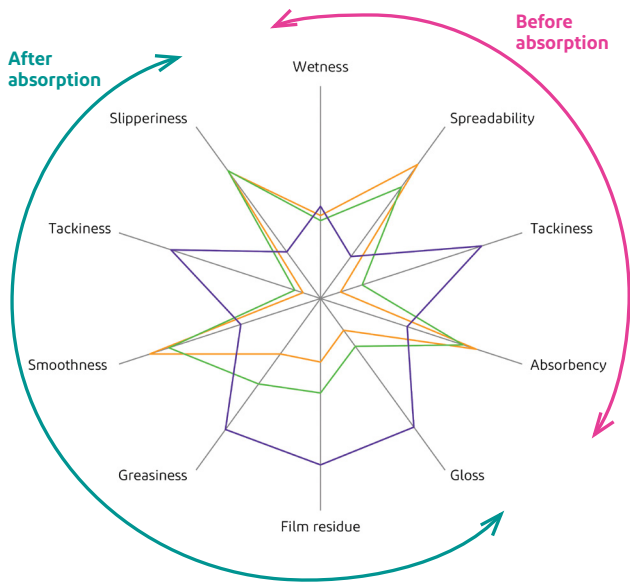
Liveo™ Silicone Elastomer Blend technology can be incorporated easily into many product forms:

- Gels, creams and novel forms to improve patient compliance due to unique sensory feel
- Creams and gels that offer a mattifying effect for acne applications

## Target indications

Drug delivery topical formulations for prescription and over-the-counter therapies focusing on growth indications such as atopic dermatitis, psoriasis, acne and scar management

## Sensory evaluation results before and after absorption

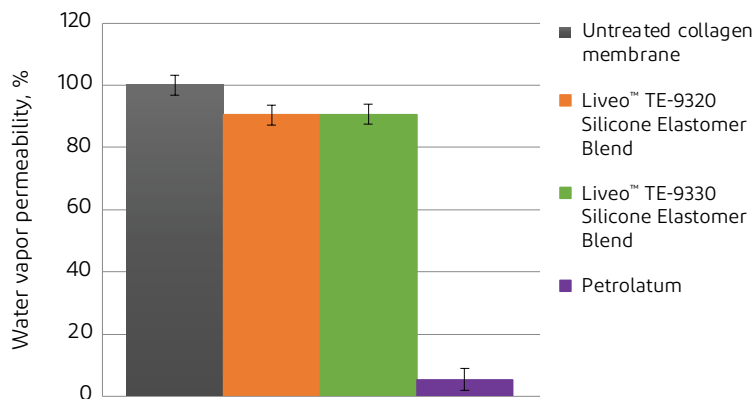


— Liveo™ TE-9320 Silicone Elastomer Blend  
 — Liveo™ TE-9330 Silicone Elastomer Blend  
 — Petrolatum

| Statistical results ( $\alpha < 0.05$ ) | Liveo™ TE-9320 Silicone Elastomer Blend <sup>(2)</sup> | Liveo™ TE-9330 Silicone Elastomer Blend <sup>(2)</sup> | Petrolatum |
|-----------------------------------------|--------------------------------------------------------|--------------------------------------------------------|------------|
| Wetness                                 | a                                                      | a                                                      | a          |
| Spreadability                           | a                                                      | b                                                      | c          |
| Tackiness                               | a                                                      | b                                                      | c          |
| Absorbency                              | a                                                      | a                                                      | b          |
| Gloss                                   | a                                                      | a                                                      | b          |
| Film residue                            | a                                                      | a                                                      | b          |
| Greasiness                              | a                                                      | b                                                      | c          |
| Smoothness                              | a                                                      | b                                                      | c          |
| Tackiness                               | a                                                      | a                                                      | b          |
| Slipperiness                            | a                                                      | a                                                      | b          |

Note: For each parameter, the use of the same letter indicates the products show no significant difference (95%). | <sup>(2)</sup>New development.

## Water vapor permeability measured by Payne cup



Note: Untreated non-occlusive collagen membrane is fixed at 100%.

## For more information about DuPont™ Liveo™ Silicone Elastomer Blends

Visit [liveo.dupont.com](https://liveo.dupont.com) – or scan the QR code below to be taken directly to the Liveo™ Silicone Excipients web page, where you'll find the Liveo™ Silicone Elastomer Blends. For sample requests, contact your Liveo™ representative.



To learn more about DuPont™ Liveo™ Healthcare Solutions, visit [liveo.dupont.com](https://liveo.dupont.com).



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Positive Patient Outcomes.

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