SILICONE ELASTOMER GEL – SHAPING YOUR SENSORY EXPERIENCE
WHY ELASTOMER GELS?

A luxurious sensory experience has become one of the most-desired attributes for skin care and cosmetic products. BELSIL® elastomer gels from WACKER give your skin the unique velvety soft feel it deserves.

Because at WACKER we understand that when it comes to the skin, feeling is believing.

A trend toward products with exceptional skin profiles has driven the skin care and color cosmetics markets for the past five years1. A silky, powdery sensation produces a sense of luxury, which makes application a more pleasurable experience.

The BELSIL® elastomer gel product series enhances this effect in your formulation, offering you an unforgettable sensory experience with multiple other benefits for your skin.

A sophisticated architecture for a high-performing material

A standard silicone elastomer gel is comprised of lightly cross-linked siloxane gel particles swollen in a solvent. BELSIL® products use various types of elastomer gel actives and solvents at different viscosities, which help make your products feel richer. In elastomer resin gels, the film-forming property boosts the functionality of the formulation. The following figure shows our BELSIL® REG 1102 product as an example:

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footnote: "Mintel GNPD reported a 35% increase in the number of newly launched products that focused on creating a silky, luxurious feel on the skin (APAC market data, year 2010-2014)"
At WACKER, we believe in the best of your products. Our extensive product portfolio offers unlimited opportunities for perfecting your products.

### Key Benefits
- Add a cushiony skin feel
- Increase water resistance
- Form longlasting, non-tacky films
- Modify rheology
- Add body/texture to formulations
- Increase SPF in sunscreen formulation
- Absorb oils and cosmetic fluids
- Easily incorporated into formulations

### Table: Product Properties

<table>
<thead>
<tr>
<th></th>
<th>BELSIL® RG 90</th>
<th>BELSIL® RG 100</th>
<th>BELSIL® REG 1102</th>
<th>BELSIL® REG 102</th>
<th>BELSIL® EG 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>INCI Name</td>
<td>Isododecane</td>
<td>Cyclopentasiloxane, Dimethicone/Vinyltrimethylsiloxysilicate Crosspolymer</td>
<td>Dimethicone/Dimethicone/Vinyltrimethylsiloxysilicate Crosspolymer</td>
<td>Cyclopentasiloxane Dimethicone/Vinyltrimethylsiloxysilicate Crosspolymer</td>
<td>Cyclopentasiloxane and Dimethicone/Vinyl Dimethicone Crosspolymer</td>
</tr>
<tr>
<td>Solids content</td>
<td>~ 20 %</td>
<td>~ 20 %</td>
<td>~ 20 %</td>
<td>~ 14 %</td>
<td>~ 14 %</td>
</tr>
<tr>
<td>Solvent</td>
<td>Isododecane</td>
<td>Cyclopentasiloxane</td>
<td>Dimethicone</td>
<td>Cyclopentasiloxane</td>
<td>Cyclopentasiloxane</td>
</tr>
<tr>
<td>Volatile Solvent</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Density</td>
<td>0.82 g/cm³</td>
<td>0.94 g/cm³</td>
<td>0.93 g/cm³</td>
<td>0.95 g/cm³</td>
<td>0.95 g/cm³</td>
</tr>
<tr>
<td>Viscosity</td>
<td>~ 30,000 mPa.s</td>
<td>~ 125,000 mPa.s</td>
<td>~ 100,000 mPa.s</td>
<td>~ 100,000 mPa.s</td>
<td>~ 350,000 mPa.s</td>
</tr>
<tr>
<td>Skin Feel</td>
<td>Velvety, powdery</td>
<td>Light, silky</td>
<td>Silky, velvety</td>
<td>Silky</td>
<td>Light, powdery</td>
</tr>
</tbody>
</table>

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**Image**: A hand applying a product to a face, with two vials of the product in the background.
**SPECIAL FEATURES & PROPERTIES**

BELSIL® EG 5 is a silicone elastomer gel that is swollen in solvent e.g. cyclopentasiloxane. It is easy to distribute on skin and gives an excellent soft and powdery skin feel.

**Film-forming Effects**

BELSIL® elastomer resin gels (RG 90, RG 100 and REG 1102) incorporate Trimethylsiloxysilicate (TMS) to create film-forming properties. TMS improves water and transfer resistance, adhesion, and multi-functionality of the formulation.

**Improved Rheology**

BELSIL® elastomer gels exhibit shear-thinning rheology, which improves distribution of skin care creams and color cosmetics.

**Adhesion**

BELSIL® elastomer gels create homogenous coatings that are not easily wiped off.

**Transfer Resistance**

BELSIL® elastomer gels create long-lasting effects by improving the transfer resistance.

**Water Repellency**

BELSIL® RG 90 and RG 100 create a less tension between water droplets and surfaces.

*most prominent in elastomer resin gel products
BELSIL® elastomer gels and elastomer resin gels are ideal for formulating a wide variety of applications, ranging from skin care to color cosmetic products.

**Skin & Sun Care**
- Nourishing night cream W/O
- Nourishing body lotion
- Protective moisturizing lotion for babies
- Tropical summer butter

**Color**
- O/W liquid foundation
- W/O cream foundation
- Satin liquid foundation O/W
- Eye shadow
- BB Cream
- CC Cream

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**FOR A VARIETY OF APPLICATIONS**

BELSIL® elastomer gels and elastomer resin gels are ideal for formulating a wide variety of applications, ranging from skin care to color cosmetic products.

**HHOW CAN WE HELP YOU?**

We will gladly help you turn your products into bestsellers. WACKER silicone products foster innovation by offering considerable added value. Our technical experts will gladly help you develop products reflecting current trends and tailored to regional demands.

For more information, visit us at www.wacker.com/belsil

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**SELECTION GUIDE**

<table>
<thead>
<tr>
<th>BELSIL®</th>
<th>RG 100</th>
<th>RG 90</th>
<th>REG 1102</th>
<th>REG 102</th>
<th>EG 5</th>
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</thead>
<tbody>
<tr>
<td>Special transfer resistance</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Volatile solvent</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>High solvent compatibility</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>D4 and D5 level below &lt; 0.1%</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Note: the above products can be used as a replacement for standard silicone elastomers.

BELSIL® is a registered trademark of Wacker Chemie AG.
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