There are so many ways AEROSIL® and SIPERNAT® silica can be used in personal care products. With its comprehensive service, Evonik is always ready for the challenges that each new day brings, developing innovative concepts for the personal care industry.

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Evonik Industries is a leading supplier of precipitated silica, which is used as a reinforcing filler or carrier in a diverse range of applications.

SIPERNAT® synthetically manufactured silica is a fine, loose, white powder. Like fumed silica, SIPERNAT® silica is amorphous. SIPERNAT® silica has versatile properties that make production processes and final products more efficient and may be used in many types of personal care applications. We find silica in many of the personal care products we use daily, from toothpaste to antiperspirant to lipstick.

AEROSIL® products are recognized in the personal care industry for their versatility and effectiveness, whether used to improve existing formulations or to develop new ones. Our products are characterized by their high purity and chemical inertness, which are especially important in cosmetic applications. In addition, the AEROSIL® brand is characterized by one thing in particular: Our value-added product philosophy. This philosophy is driven by a package of service components which complement each other to achieve great effects with very small particles. These components include extensive technical service and support, guide formulations, research and development, logistics concepts and handling technology. Our objective is to be an innovation leader and work hand-in-hand with our customers.

SIPERNAT® and SIDENT® Precipitated Silica

AEROSIL® – more than just a powder

SIPERNAT® and AEROSIL® silica are used in familiar personal care products.
Enhancing Skin and Oral Care Products

Your formulations can deliver performance that lasts

Gels and Emulsions
With AEROSIL™ fumed silica, cosmetic oils can easily be converted into highly viscous, largely transparent gels. Particularly high viscosities can be achieved with the hydrophilic types, such as AEROSIL® 200 and 300. Hydrophobic types such as AEROSIL® R 972, R 974 and R 812 are perfect for creating or adjusting thixotropic properties, improving suspension without significantly increasing viscosity, and imparting stability and water-resistance to emulsions. Hydrophobic AEROSIL® fumed silica also increases the water resistance of creams and lotions. Especially sunscreen and make-up formulations benefit from this effect.

AEROSIL® fumed silica is not suitable for thickening aqueous systems.

Major advantages of AEROSIL® fumed silica as a thickener for non-polar systems are:

- AEROSIL® products can be incorporated at room temperature and without activation
- No need to expend time and energy heating the raw materials and cooling the emulsion
- AEROSIL® fumed silica can be dispersed using equipment that is customary in the cosmetics industry
- Formulations thickened with AEROSIL® fumed silica display low sensitivity to temperature, electrolytes and pH

Depending on the desired effect, AEROSIL® fumed silica can be used in a concentration range from 0.5 to 10% w/w. Concentration levels above 3% w/w can specifically counteract the oily or greasy skin feel of a formulation.

SIDENT® and AEROSIL® – For perfect flow of toothpaste.
Our products SIDENT® 22 S and AEROSIL® 200 have a proven track record for toothpaste thickening efficiency. Whether in all-silica formulations, in carbonate pastes, or in those using phosphate abrasives, both types of silica will give your toothpaste the rheological body for good filling during manufacturing and easy handling by the consumer. The choice is yours: whether 7–9% of SIDENT® 22 S silica or 3–5% of high-performance AEROSIL® 200 fumed silica, you will obtain the thickness you are looking for. With its very low iron content, AEROSIL® 200 is well-suited for thickening peroxide toothpaste.

AEROSIL® fumed silica allows the viscosity of an oleo gel to be adjusted as required.

SIDENT® 22 S and AEROSIL® 200 help give toothpaste a perfect consistency.
When you want your product to be invisible

Antiperspirants

AEROSIL® and SIPERNAT® silica fulfill a wide range of functions in antiperspirant sprays, roll-ons and sticks. As an effective suspension stabilizer AEROSIL® products prevent the agglomeration of active ingredients – generally aluminum and zirconium salts (AP salts) – helping to ensure that they are evenly distributed and have an intense and long-lasting effect. AEROSIL® and SIPERNAT® silica can also increase the viscosity of deodorant roll-ons and sticks.

In aerosol sprays, silica prevents suspended active ingredients from settling and the spray nozzle from clogging. Another advantage over other suspending agents is that AEROSIL® fumed silica can increase the transparency of deodorants. Particularly on dark materials, antiperspirants often leave a fine, white residue. The use of silica significantly reduces this problem. It is also not necessary to add iron scavengers and whitening agents to antiperspirant sticks made with silica.

AEROSIL® and SIPERNAT® silica help keep the formulation nice and simple!
When it comes to volume and color – we can help

**Hair Bleaching Agents**
AEROSIL® fumed silica effectively prevents moistening and caking of peroxo and persulfate salts, which are usually used in bleaching powders. This results in improved free-flow properties, even after prolonged periods of storage. AEROSIL® products can also be used as thickening and stabilizing agents in bleaching creams.

**Hair Dyes**
In hair dyes, AEROSIL® fumed silica prevents powdered colorant components from reacting and caking prematurely. Hydrophilic types are very effective as drying agents, while hydrophobic types are particularly helpful as powder flow regulators. Dispersion dyes can also be stabilized with AEROSIL® products.

**Hair Conditioners**
In conditioners AEROSIL® fumed silica can help increase the volume of the hair, counteracting the hair “flattening” effect of the conditioning agents.

AEROSIL® fumed silica prevents colorant components from reacting prematurely. The color starts to work only after it’s applied to the hair.
Your colors will leave a bold and lasting impression

Lipsticks
AEROSIL® and SIPERNAT® silica improve the homogeneous distribution of the pigments in lipstick. Once applied, the silica prevents the pigments from migrating or 'bleeding' into the fine lines of the lips.

Face and Eye Makeup
Products such as face powder, rouge, eye shadow, mascara and cosmetic pencils can be optimized when silica products are used. As effective free flow agents, AEROSIL® and SIPERNAT® silica improve the flow of powders thereby improving production productivity. They also enable the use of high pigment contents in cosmetic products by acting to prevent reagglomeration of the pigments. SIPERNAT® specialty silica is also an effective mattifying agent that prevents the face from appearing "shiny".

Nail Polish
AEROSIL® fumed silica improves the distribution of nail polish pigments and prevents them from settling. In addition, rheological behavior can be adjusted as required, thus improving the application properties as well. Clear nail polish formulations, such as top and base coats, can be formulated with AEROSIL® fumed silica, provided that the refractive index of the solvent system corresponds to that of the silica.

Using AEROSIL® fumed silica radically improves the payoff of lipstick. (above) without AEROSIL® fumed silica. (below) with AEROSIL® fumed silica.
### AEROSIL® and SIDENT® silica for skin and oral care

<table>
<thead>
<tr>
<th>Function</th>
<th>Oleo Gels*</th>
<th>Emulsions*</th>
<th>Sunscreens*</th>
<th>Toothpaste*</th>
</tr>
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<tbody>
<tr>
<td>Hydrophobizing agent</td>
<td>AEROSIL® R 972</td>
<td>AEROSIL® R 972</td>
<td>AEROSIL® R 972</td>
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<td>Suspending, dispersing agent</td>
<td>AEROSIL® R 805</td>
<td>AEROSIL® R 972</td>
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<tr>
<td>Viscosity increasing, gelling agent</td>
<td>AEROSIL® R 972</td>
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<tr>
<td>Temperature, mechanical and storage stability increasing agent</td>
<td>AEROSIL® R 972</td>
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<td>AEROSIL® R 972</td>
<td>AEROSIL® R 812</td>
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* We can supply you with guide formulations for these applications.

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### AEROSIL® and SIPERNAT® silica for antiperspirants

<table>
<thead>
<tr>
<th>Function</th>
<th>Sticks*</th>
<th>Aerosols*</th>
<th>Roll-ons*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrophobizing agent</td>
<td>AEROSIL® R 974</td>
<td>AEROSIL® R 972</td>
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### AEROSIL® fumed silica for hair care

<table>
<thead>
<tr>
<th>Function</th>
<th>Bleaches*</th>
<th>Dyes*</th>
<th>Conditioners*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anti-caking, free-flow agent</td>
<td>AEROSIL® R 972</td>
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### AEROSIL® and SIPERNAT® silica for color cosmetics

<table>
<thead>
<tr>
<th>Function</th>
<th>Nail polish*</th>
<th>Lipstick*/ Lip gloss*</th>
<th>Makeup*</th>
<th>Powders*</th>
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<tr>
<td>Adsortent, carrier</td>
<td>AEROSIL® 200</td>
<td>AEROSIL® 972</td>
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The Advantage of a Global Enterprise – Local Proximity

Size usually creates distance – but not at Evonik. As a leading specialty chemicals company Evonik relies on the business philosophy: “as decentralized as possible, as centralized as necessary”. The decentralized organization at all levels and in all divisions of the company is tailored to operative units which can respond to the market quickly, flexibly and on a customer-oriented basis. The AEROSIL® and SIPERNAT® brands rely on production facilities, application-related service centers, research centers and commercial and technical service offices in all regions of the world.

The mere fact that we produce on three continents represents a decisive advantage for us and our customers when it comes to an effective world-wide delivery service. With over 1200 motivated employees in 95 countries, we also offer our customers one of the biggest service networks of all suppliers on the market.

A functioning globality, which our customers experience on a local level.

Also near you.

You may also use our website www.aerosil.com to download

- Guide Formulations for many types of personal care products
- Product Information sheets for specific products
- Safety Data Sheets (SDS)
- Technical and other literature

Just click on "Service Center".

Direct customers of Evonik can also obtain information such as certificates of analysis, order confirmation etc. online after completing a special registration process.

Detailed information regarding our technical literature can be obtained from:

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