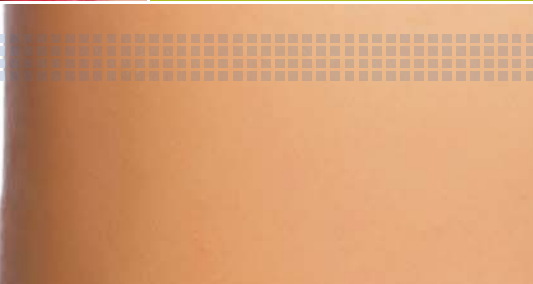


**MOMENTIVE™**

**Silicone Specialties  
for Personal Care**





Momentive products can help create silkier lotions, more efficient shampoos and conditioners, drier antiperspirants, more spreadable sunscreens and brighter, smoother cosmetics. Our growing personal care product line includes specialty fluids, copolymers, blends, gels, film formers, micropowders, emulsions and dispersions. Our highly effective formula for client relationships includes: superb products, enthusiastic technical support and application development assistance, based on more than 70 years of silicone expertise. Globally, we can help customers create breakthroughs, reduce costs and achieve their business goals.

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Core Competencies and Differentiated Technologies for Personal Care

Sensory Enhancement

Softening and Conditioning

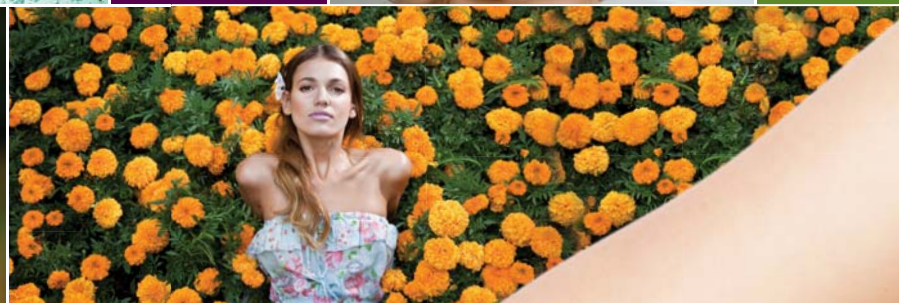
Surface Modification

Consistent Spreading

Collaborating to Advance Innovation

At Momentive, we have a number of core competencies that can allow us to deliver consumer-perceivable benefits and support key marketing claims for personal care products. These include:

- Sensory enhancement to provide the "WOW" feel to finished formulations
- Softening and conditioning to give hair that silky, soft feel and healthy look
- Surface modification to impart transfer resistance, long wear with comfort, shine and protection
- Consistent spreading and wetting to improve dispersion of pigments and spreading of active ingredients and organic oils



# Vibrant





# Sense

## Touching is Believing

There is a silky softness offered by our specialty silicones that can be hard to achieve using other materials. In makeup, creams, lotions, shampoos, conditioners and styling products, we put the "WOW" right there on your fingertips. It may put an end to tacky formulations that can take forever to smooth and dry. Our specialty silicones typically work quickly, for a softness all our own.





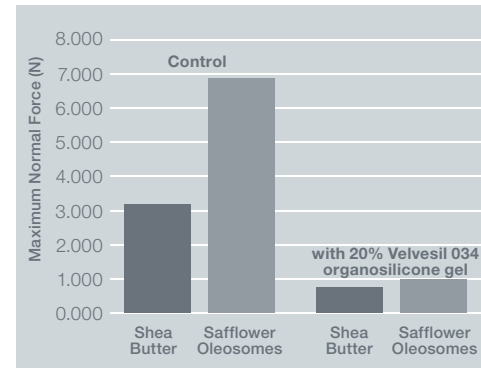
**Overview: Velvesil\* Crosspolymer Network**

Velvesil organo-silicone gels are based on a patented and unique silicone crosspolymer network that can deliver outstanding sensory benefits in most types of skin care and color formulations.

**Velvesil 034 Organosilicone**

Velvesil 034 organosilicone gel is an excellent candidate to consider to help disperse and spread cosmetic ingredients without tackiness. It can help spread inorganic pigments, deliver brighter and more uniform color in makeup formulations and provide more uniform coverage in sunscreens. It has excellent compatibility with many organic materials, enhancing the sensory benefit and stability of a wide range of personal care products.

Tack Reduction of Natural Ingredients



**Velvesil DM Silicone**

Velvesil DM silicone can promote easier spreading on the skin, leaving an exquisite, long-lasting, moisturizing and silky feel and enhanced sensory qualities for skin care products and color cosmetics. This patented multifunctional silicone copolymer network is non-emulsifying, dispersed in dimethicone, and formed in a creamy, transparent gel. It exhibits shear-thinning behavior, typically allowing smoother, more consistent spreading of anti-aging, sunscreen and moisturizer products.

**Velvesil Plus Emulsifiable Gel**

Velvesil Plus emulsifiable gel readily offers excellent compatibility with many organic materials, including highly polar organics, as well as hydrophilic and silicone components. Its powdery, silky skin feel may enhance the sensory performance of a wide range of personal care products. Easily processed at low temperatures and low shear, it may help reduce manufacturing time and expense. This versatile product is an excellent candidate to consider for formulations, from low viscosity, sprayable emulsions to highly structured anhydrous gels, all with a soft, elegant, powdery feel.

Soft



Velvesil 125 silicone can deliver a line blurring effect and a unique, soft, powdery dry skin feel to cosmetics.

Velvesil Plus emulsifiable gel is typically easy to use for formulations and may help reduce manufacturing time and cost while still helping to improve the sensory experience for your customer.

**Velvesil\* FX Gel Powder**

Velvesil FX gel powder can enhance natural-look coverage with a delightful sensory phenomenon. It combines the translucent soft-focus ability of boron nitride with the powdery velvet touch of our patented Velvesil chemistry. Adding a trisiloxane typically improves the dispersion of boron nitride within the gel matrix, for a more natural, smoother appearance on skin. This patent-pending combination may stimulate the senses while it helps blur fine lines and wrinkles.

**Velvesil 125 Silicone**

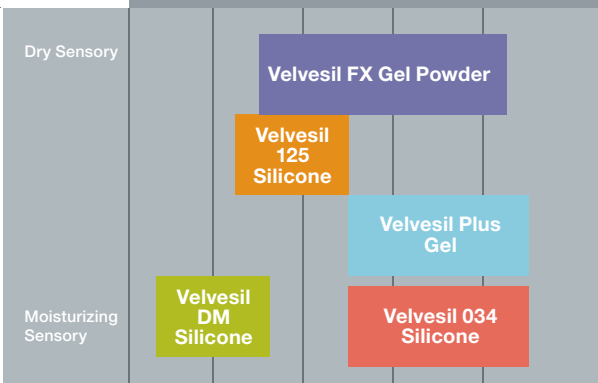
Velvesil 125 silicone crosspolymer network is our patented multifunctional sensory enhancer. It offers an exceptional feel during rub-in because of its unique particle size distribution, and it offers a silky and powdery afterfeel. Its polymerization chemistry differs from the traditional "silicone structurants." It typically provides soft focus and visual effects and gives skin a fresh new feel. Velvesil 125 silicone crosspolymer network is an excellent candidate to consider for a multitude of formulation applications. Formulators have found it to be an efficient thickener of silicone and organic ingredients, with excellent compatibility. It can be used as a stabilizer/thickener for W/O and O/W emulsions.

**Silsoft\* Silicone Gel**

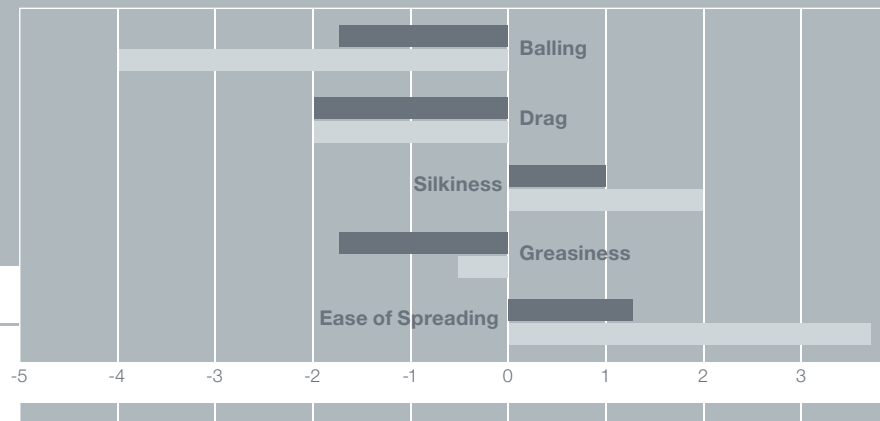
Silsoft Silicone gel is a crosslinked, high molecular weight silicone network that spreads evenly and quickly for a silky, cushioning feel. It offers significantly reduced balling effect normally associated with elastomer gels. The addition of crystal clear Silsoft Silicone gel can improve the sensory aesthetics of formulations when organic oils or sunscreens cause tackiness. Silsoft Silicone gel can be added easily into the oil phase of a formulation and can withstand heat and high shear, generally without the need for post homogenization.

Velvesil Benefit Options

	TEWL Reduction	Soft-Focus Benefit	Pigment Dispersion	Ease of Formulation
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Velvesil Platform Benefits



Each Velvesil material offers a distinct sensory with functionality. The choice depends upon the finished formulation requirements.

Note: Test results. Actual results may vary.



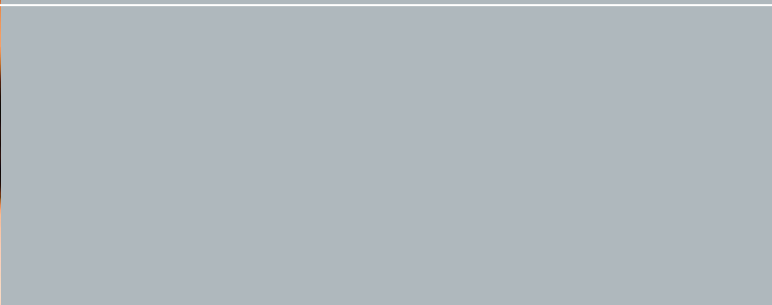
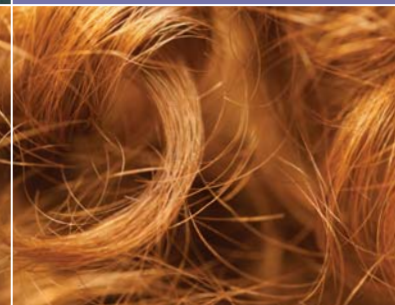
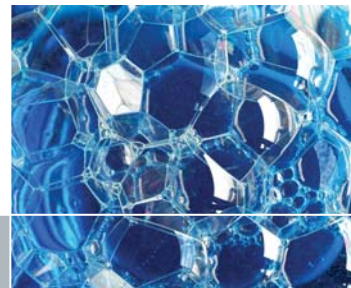




# Touch

## Feel the Difference

Healthy hair should be soft, full and shiny, not heavy or greasy. Traditional silicones offer great conditioning, but lack the multifunctionality of our specialty materials. Our growing portfolio of  $[AB]_n$  amino copolymers soften each strand, like a softener on silk, so hair is easier to comb, wet or dry. Our amino "quats" cover every hair shaft with a protective, conditioning film, trapping moisture within, for longer lasting softness and manageability. Create a touchable feel and a thrilling shine that makes your consumers take notice.



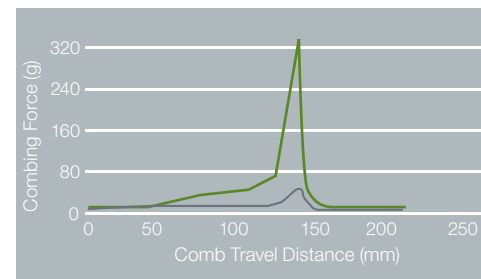


### Silsoft\* Q PF Quaternary Silicone

Silsoft Q PF quat silicone is a 20% active microemulsion of a proprietary silicone quat that can help deliver volume and amazing softness, as well as conditioning, to fine hair. The unique phase behavior of the silicone quat with water relates to the lubricity of Silsoft Q PF quat silicone during wet combing and its exceptional softening performance benefits. Silsoft Q PF quat silicone is an excellent ingredient to consider for shampoos, conditioners and pre-treatment products aimed at providing volume and softness to fine hair.

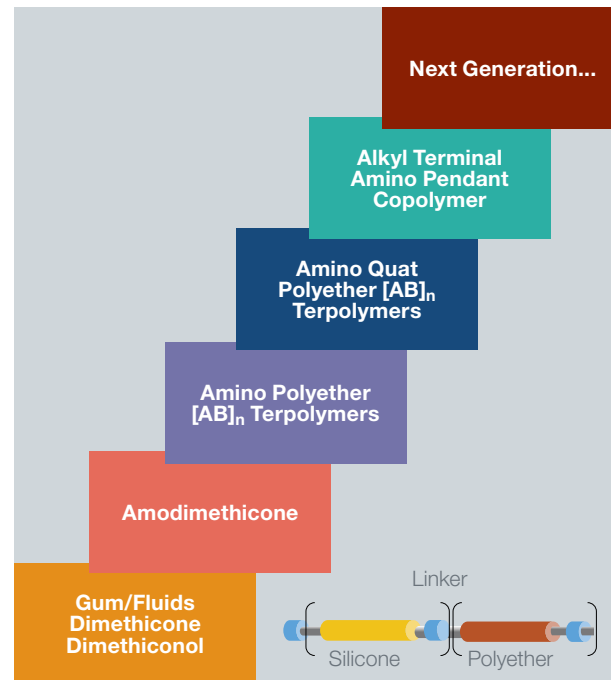
Silsoft Q PF quat silicone can significantly reduce peak combing force.

Reduction in Peak Combing Force



Amino ■ Silsoft Q PF silicone

### Conditioning for Hair Care



Hair softening and conditioning: the history of platform innovation and differentiated technologies for consumer needs, by Momentive.



Note: Test results. Actual results may vary.



### How Does It Work?

#### Silicone film on hair fiber

- Key properties**
- Substantive; hydrophobic
  - Continuous film
  - Low thermal conductivity

#### Typical function

- Rinse-resistance
- Lower rate of water loss
- Even distribution of heat
- Modulated rate of temperature increase

#### Potential end benefits

- Smooth; soft feel
- Moisturized hair
- No localized damage
- Less damage to cortex
- Hair is less brittle

#### Silicone droplets on hair fiber

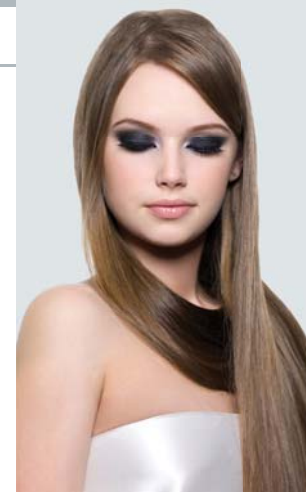
- Key properties**
- Substantive; small size droplets

#### Typical function

- Rinse-resistance
- Penetration under uplifted cuticles
- Slowed water loss from hair
- Heat-sink and hydrogen bonding

#### Potential end benefits

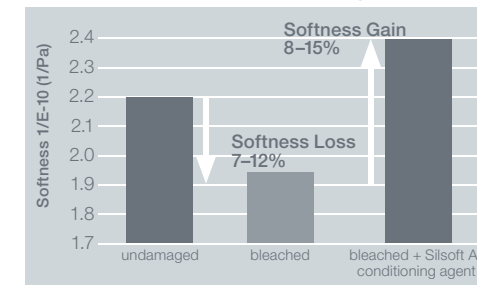
- Smooth; soft feel
- Good physical condition



### Silsoft\* A+ Conditioning Agent

Silsoft A+ conditioning agent can help provide excellent conditioning to damaged hair. It is a surfactant-free emulsion of an amino [AB]<sub>n</sub> multiblock copolymer silicone with an optimal hydrophilic/hydrophobic balance. Compared to traditional amino silicones, Silsoft A+ conditioning agent typically has enhanced deposition onto damaged hair, therefore offering better performance at the same actives levels, with potential cost-saving benefits.

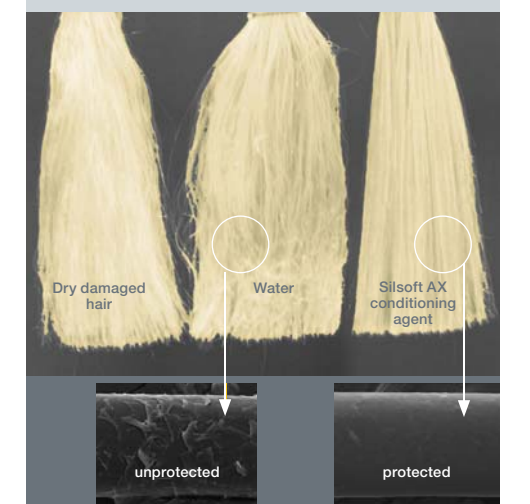
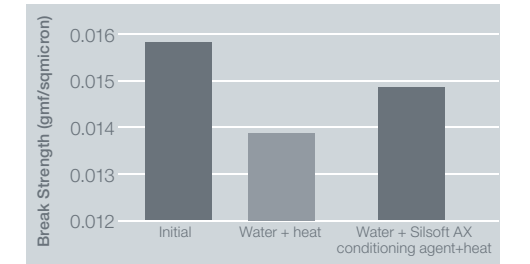
#### Silsoft A+ Conditioning Agent Moisturization Benefit for Damaged Hair



### Silsoft AX Conditioning Agent 15

Silsoft AX conditioning agent is an alkyl modified amino fluid that can help formulas deliver superior smoothness and shine, even when hair dries. The combination of both pendant amino and terminal alkyl groups on the silicone structure helps provide enhanced smoothness, softness and manageability, with thermal protection.

#### Silsoft AX Conditioning Agent: Thermal Protection



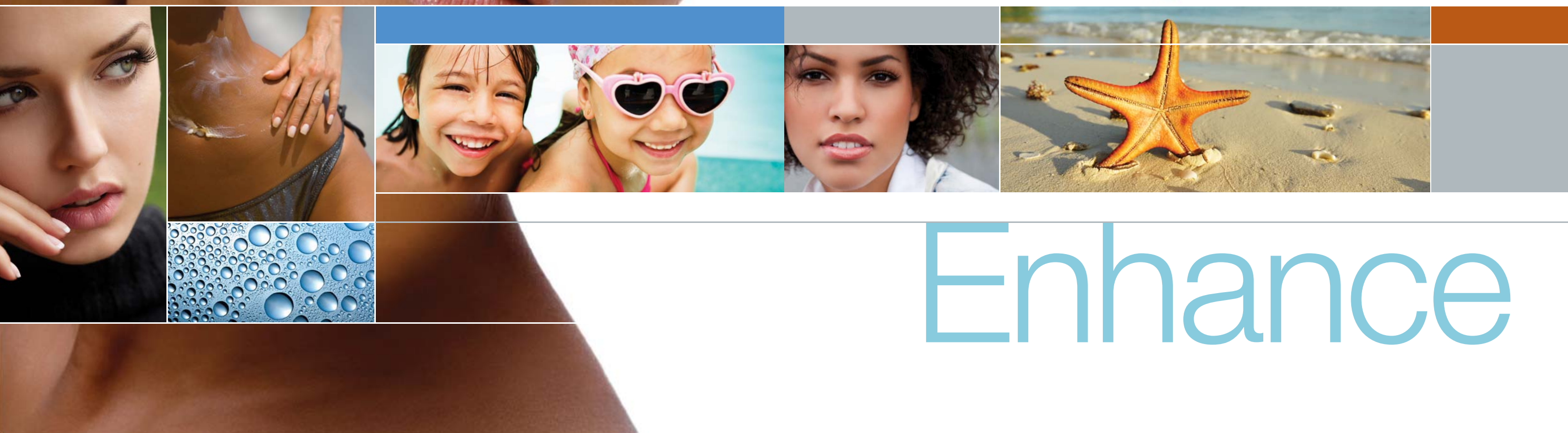
# Shine





## Stay Flexible

Sometimes beauty is just on the surface: by forming a film on skin or hair, you can formulate personal care products with real staying power—and less transfer. Our specialty silicones can also enhance the sensory qualities of the film. Now you can enjoy long lasting wear, with comfort. You can use a film former as a surface modifier to improve water resistance and boost the performance of sunscreens.



# Enhance



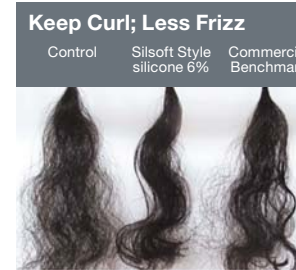


SilForm\* Flexible resin and SR1000 can provide improved wet rub-off to mascaras, and non-transfer capabilities when added to lipsticks and skin care products.



### Silsoft\* Style Silicone

Silsoft Style silicone can give hair long lasting, well-defined curls with a flexible natural feel in high humidity situations. An anionic film-forming emulsion of silica crosslinked polydimethylsiloxane, blended with a trisiloxane, it typically spreads rapidly with low tack and dries quickly.



Silsoft Style silicone can reduce frizz caused by high humidity and can help maintain curl memory.

### In-Vitro SPF: Water-proofing



The addition of SR1000 can boost SPF values and water resistance.

### SR1000

SR1000 is a silicone MQ resin that has demonstrated post-immersion in-vitro SPF retention ranging from 50% to 90%. SR1000 offers adhesion to skin, reduced product wash-off and provides long lasting benefits.

### SilForm\* Flexible Resin

SilForm Flexible resin can give the unusual combination of comfort and long-lasting wearability in personal care formulations. SilForm Flexible resin is a film-forming silicone MT resin that mimics the movement of skin, for a comfortable, non-tight feel. It can offer the non-transfer properties that are typically associated with silicone resins and that are especially beneficial for color cosmetics and sun protection formulations. SilForm Flexible resin can also help improve the comfort of traditional MQ resins, without significantly impacting their excellent transfer resistance.

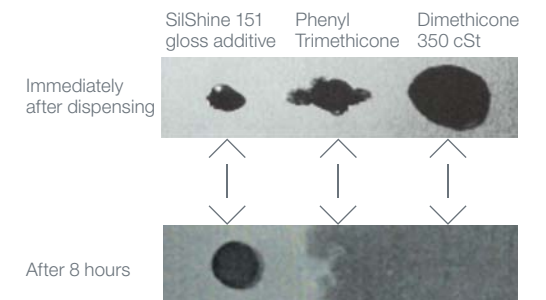


### Silsoft SurFace PF Film Former

Silsoft SurFace PF organosilicone is a proprietary film-forming emulsion combining non-transfer capabilities with excellent feel and water resistance. It can improve wearability in foundation, mascara and lipstick. Based on an acrylated silicone copolymer that is emulsion-polymerized, it can produce a stable silicone-in-water emulsion with a highly crosslinked silicone matrix. When dry, the emulsion typically leaves a continuous silicone film that is an effective transfer barrier.

### SilShine\* 151 Gloss Additive

SilShine 151 gloss additive is a silicone film former that can bring visually perceivable high shine to lips and hair. It offers high-refractive index, non-volatility, non-migration and organic compatibility. Its silicone resin structure typically yields excellent film-forming properties. Its phenyl functionality is compatible with most organic emollients, without sacrificing compatibility with silicones.



SilShine 151 gloss additive migrates less than phenyl trimethicone and dimethicone.

Note: Test results. Actual results may vary.

# Lasting





# Flow

## Be Flawless

Flawless. That's the look. How do you make sure a pigment spreads evenly in a foundation? Reduce surface tension, so active ingredients can spread rapidly on the skin or down each individual hair. Choose from a wide range of dimethicone copolyols, alkyl trisiloxanes and organomodified siloxane copolymers to deliver the benefits you seek within different phases. Their multi-functionality can help you reduce production time and enhance product application properties.

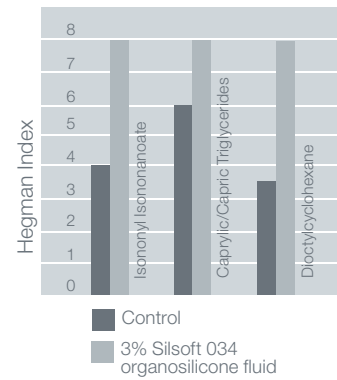




**Overview:  
Silsoft\* Dimethicone Copolyols**

Silsoft dimethicone copolyols are multifunctional, surface-tension-reducing molecules. The dimethicone portion can deliver excellent conditioning and gloss in hair care products and remarkable sensory qualities in skin care formulations. The polyether component typically results in emulsification properties, differentiated solubility and compatibility, plus ease of use during processing. By modifying these two portions of the molecular structure independently, a range of materials can be created, resulting in diverse foaming, solubility, emulsification, pigment dispersion and wetting benefits.

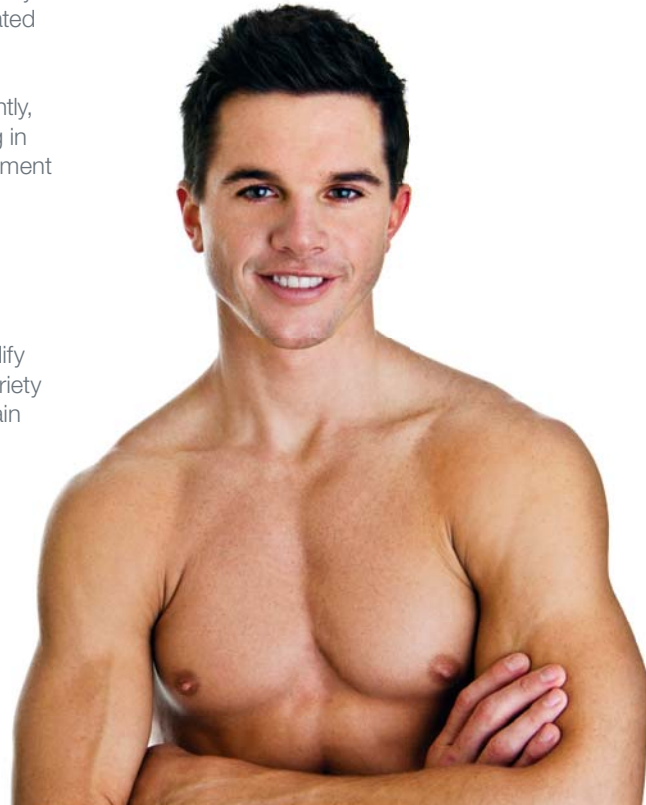
**TiO<sub>2</sub> Dispersibility in Various Carriers**



Silsoft 034 organosilicone fluid can help boost SPF values by spreading active ingredients evenly and quickly.

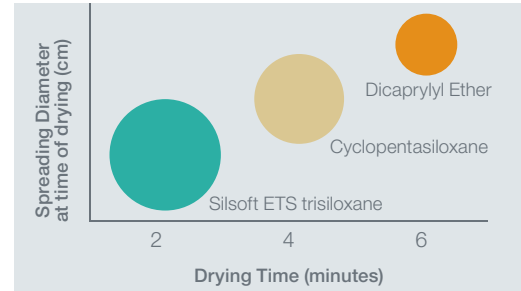
**Silsoft 034  
Organosilicone Fluid**

Silsoft 034 organosilicone fluid can help modify the feel and improve the spreadability of a variety of cosmetic oils. Now formulations that contain vegetable oils, cosmetic esters, petrolatum or mineral oil can feel less greasy. Silsoft 034 organosilicone fluid is an excellent candidate to consider for skin care products, providing a silky afterfeel. It can allow oil to spread more effectively throughout the formulation, so lotions and creams require less rub-in time. In color cosmetic formulations, Silsoft 034 organosilicone fluid can offer a silky afterfeel and can significantly improve the dispersibility of inorganic pigments in formulations that contain organic oils.

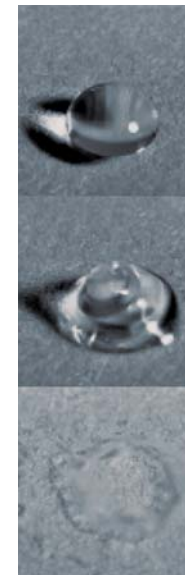
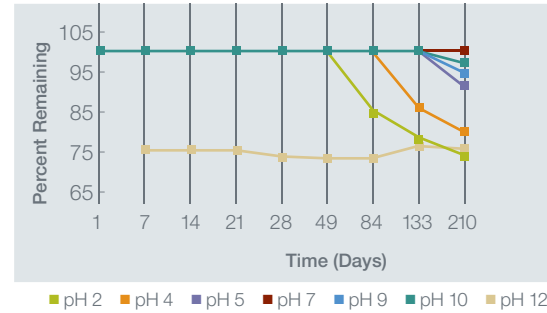


**Consistent Spreading**

**Spreading Potential**



**Hydrolytic Stability for Silsoft Spread TT Fluid**



The addition of a Silsoft dimethicone copolyol to a formulation can improve spreading for an easier, smoother application of personal care products.

**Silsoft\* ETS Trisiloxane**

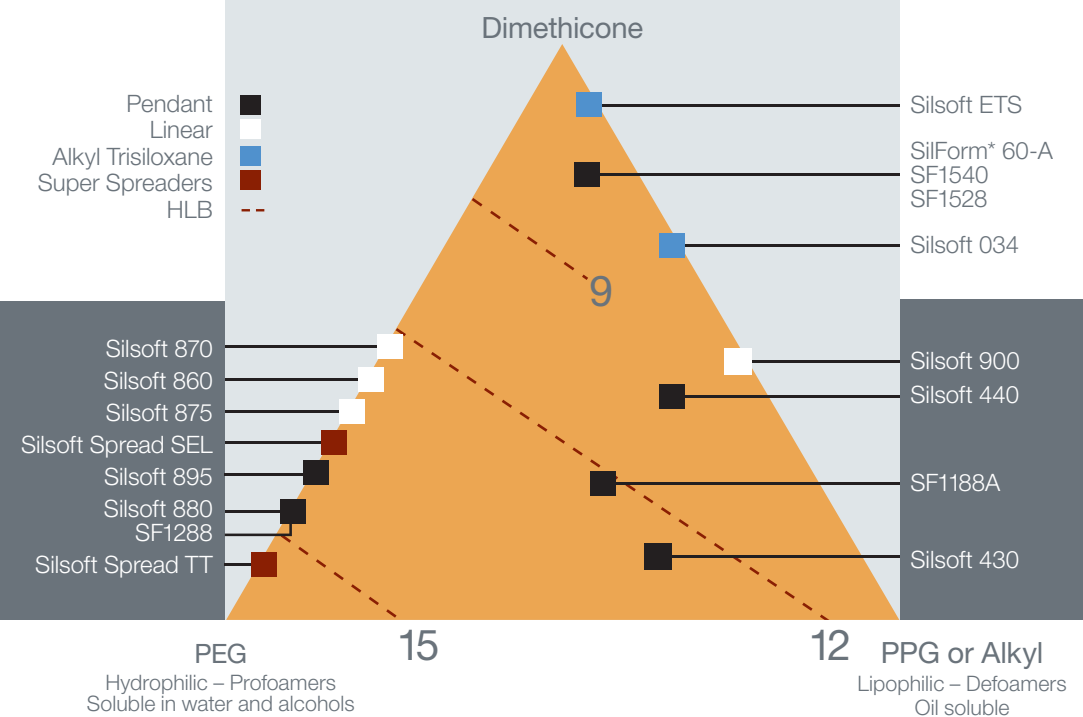
Silsoft ETS trisiloxane is a highly volatile linear siloxane that provides an outstanding sensory experience. It spreads easily and rapidly and feels dry and light upon application. Silsoft ETS trisiloxane, as a multifunctional raw material, can help build personal care products that provide highly valued sensory benefits.

**Silsoft Spread SEL and Silsoft Spread TT Fluids**

Silsoft Spread SEL fluid is a non-ionic organomodified siloxane copolymer and Silsoft Spread TT fluid is a non-ionic organomodified silane copolymer. These products can reduce the surface tension of personal care formulations, providing the superspreading of actives and inorganic pigments on skin and hair. Silsoft Spread SEL fluid is typically stable in the aqueous phase from pH 6 to pH 11, while Silsoft Spread TT fluid is typically stable in the aqueous phase from pH 2 to pH 12.

**Copolymer Selection Guide**

**Emolliency, Conditioning, Water Barrier, Spreading**



Each corner of the triangle either represents 100% Dimethicone, 100% PEG or 100% PPG or Alkyl. The properties of a product can be estimated depending upon its position within the selector triangle, relative to the corners.

Note: Test results. Actual results may vary.

**Smooth**





24 **Silicone Specialties for Personal Care**  
Potential Applications

Product Category and Product Name	INCI Name	Antiperspirant/Deodorant					Decorative & Color Cosmetics					Ethnic Hair Care				Hair Care					Hair Color Retention			Shaving		Shower & Bath			Skin & Sun Care			
		Creams	Gels	Roll-ons	Pump Sprays	Sticks/Solids	Eye Shadow	Mascara	Foundation	Lip Products	Powders	Shampoo	Conditioner	Styling Products	Relaxers	Shampoo	Conditioner	Curl Activators	Cuticle Coats	Waxes/Pomades	Mousse	Pump Spray	Shampoo	Conditioner	Developers	Pre/After-Shave Lotion	Shaving Foam	Liquid Soap	Shower Gel	Shower Conditioner	Body Care	Facial Care
<b>Silicone Structurants/Sensory Enhancers</b>																																
<b>Velvesil* 034 organosilicone gel</b>	Caprylyl Methicone (and) C30-45 Alkyl Cetearyl Dimethicone Crosspolymer	X	X	X	X		X	X	X	X		X	X		X		X		X			X		X						X	X	X
<b>Velvesil FX gel powder</b>	Cyclopentasiloxane (and) Boron Nitride (and) Caprylyl Methicone (and) C30-45 Alkyl Cetearyl Dimethicone Crosspolymer	X	X	X		X	X	X	X	X		X					X	X							X				X	X	X	
<b>Velvesil Plus gel</b>	Cyclopentasiloxane (and) C30-45 Alkyl Cetearyl Dimethicone Crosspolymer (and) PEG/PPG-20/23 Dimethicone	X	X	X		X	X	X	X	X		X				X	X							X				X	X	X		
<b>Velvesil DM silicone</b>	Dimethicone (and) Cetearyl Dimethicone Crosspolymer					X	X	X	X	X		X				X	X							X			X	X	X	X		
<b>Velvesil 125 crosspolymer network</b>	Cyclopentasiloxane (and) C30-45 Alkyl Cetearyl Dimethicone Crosspolymer	X	X	X		X	X	X	X	X		X				X	X							X			X	X	X	X		
<b>Silsoft* Silicone gel</b>	Cyclopentasiloxane (and) Cetearyl Dimethicone/Vinyl Dimethicone Crosspolymer	X	X	X		X	X	X	X	X														X					X	X	X	
<b>SFE839</b>	Cyclopentasiloxane (and) Dimethicone/Vinyl Dimethicone Crosspolymer	X	X	X		X	X	X	X	X														X					X	X	X	
<b>Silicone Spheres</b>																																
<b>Tospearl* AQ microspheres</b>	Polymethylsilsesquioxane (and) Polyquaternium-7 (and) PEG-7 Glyceryl Cocoate (and) Methylsilanol Tri-PEG-8 Glyceryl Cocoate								X						X	X								X		X	X	X	X	X	X	
<b>Tospearl 150KA microspheres</b>	Polymethylsilsesquioxane						X	X	X	X	X																		X	X	X	
<b>Tospearl 1110A microspheres</b>	Polymethylsilsesquioxane						X	X	X	X	X																		X	X	X	
<b>Silsoft E-Pearl emulsion</b>	Polymethylsilsesquioxane (and) Dimethicone (and) Isohexadecane (and) PEG-40 Stearate (and) Cetearyl Methicone (and) Steareth-2 (and) Steareth-21									X														X		X	X	X	X	X	X	
<b>Tospearl 120A microspheres</b>	Polymethylsilsesquioxane						X	X	X	X	X				X														X	X	X	
<b>Tospearl 145A microspheres</b>	Polymethylsilsesquioxane						X	X	X	X	X																		X	X	X	
<b>Tospearl 2000B microspheres</b>	Polymethylsilsesquioxane	X		X		X	X	X	X	X																			X	X	X	
<b>Tospearl 3000A microspheres</b>	Polymethylsilsesquioxane	X		X		X	X	X	X	X																			X	X	X	
<b>Boron Nitride</b>																																
<b>Momentive Softouch* CCS402 (BN) powder</b>	Boron Nitride	X					X	X	X	X	X													X	X				X	X	X	
<b>Momentive Softouch CC6097 (BN) powder</b>	Boron Nitride	X					X	X	X	X	X													X	X				X	X	X	
<b>Momentive Softouch CC6064 (BN) powder</b>	Boron Nitride (and) Dimethicone						X	X	X	X																			X	X	X	
<b>Momentive Softouch CCS102 (BN) powder</b>	Boron Nitride	X	X	X			X	X	X	X	X													X	X				X	X	X	
<b>Momentive Softouch CC6004 (BN) powder</b>	Boron Nitride	X	X	X			X	X	X	X	X													X	X				X	X	X	
<b>Momentive Softouch CC6058 (BN) powder</b>	Boron Nitride	X	X	X			X	X	X	X	X													X	X				X	X	X	
<b>Momentive Softouch CC6059 (BN) powder</b>	Boron Nitride	X	X	X			X	X	X	X	X													X	X				X	X	X	
<b>Momentive Softouch CC6069 (BN) powder</b>	Boron Nitride	X	X	X			X	X	X	X	X													X	X				X	X	X	
<b>Silicone Resins</b>																																
<b>SilForm* Flexible resin</b>	Polymethylsilsesquioxane	X					X	X	X	X							X	X		X									X	X	X	
<b>SR1000</b>	Trimethylsiloxy silicate						X	X	X	X							X	X		X									X	X	X	
<b>SS4230</b>	Cyclopentasiloxane (and) Trimethylsiloxy silicate						X	X	X	X							X	X		X									X	X	X	
<b>SS4267</b>	Dimethicone (and) Trimethylsiloxy silicate						X	X	X	X	X						X	X		X									X	X	X	
<b>Silsoft FR-5 fluid</b>	Trifluoropropyl dimethylsiloxy/Trimethylsiloxy Silsesquioxane (and) Dimethicone	X					X	X	X	X							X	X		X									X	X	X	
<b>SilForm FR-10 fluid</b>	Trifluoropropyl dimethylsiloxy/Trimethylsiloxy Silsesquioxane (and) Dimethicone	X					X	X	X	X							X	X		X									X	X	X	
<b>Silsoft Style silicone</b>	Silica Dimethicone Silylate (and) TEA Dodecylbenzenesulfonate (and) PEG/PPG-5/3 Trisiloxane											X				X	X	X	X													
<b>Silicone Emulsifiers</b>																																
<b>SF1528</b>	Cyclopentasiloxane (and) PEG/PPG-20/15 Dimethicone		X	X	X		X	X				X	X				X							X				X	X	X		
<b>SF1540</b>	Cyclopentasiloxane (and) PEG/PPG-20/15 Dimethicone		X	X	X		X	X				X	X				X							X				X	X	X		
<b>SilForm EOF emulsifier</b>	Polysilicone-25			X	X	X	X	X	X			X	X				X	X					X	X				X	X	X		
<b>SilForm 60-A emulsifier</b>	PEG/PPG-20/15 Dimethicone (and) Diisopropyl Adipate			X	X	X	X	X	X			X	X				X	X					X	X				X	X	X		
<b>Silicone Waxes</b>																																
<b>SF1632</b>	Cetearyl Methicone	X		X			X	X	X			X					X							X			X	X	X	X	X	
<b>SF1642</b>	C30-45 Alkyl Dimethicone	X		X			X	X	X			X					X										X	X	X	X	X	

Note: A full line of basic silicones is available, including oils, volatiles, gums and various blends. Please contact Customer Service for additional information.



26 **Silicone Specialties for Personal Care**  
Potential Applications

Product Category and Product Name	INCI Name	Antiperspirant/Deodorant					Decorative & Color Cosmetics					Ethnic Hair Care				Hair Care					Hair Color Retention			Shaving		Shower & Bath			Skin & Sun Care				
		Creams	Gels	Roll-ons	Pump Sprays	Sticks/Solids	Eye Shadow	Mascara	Foundation	Lip Products	Powders	Shampoo	Conditioner	Styling Products	Relaxers	Shampoo	Conditioner	Curl Activators	Cuticle Coats	Waxes/Pomades	Mousse	Pump Spray	Shampoo	Conditioner	Developers	Pre/After-Shave Lotion	Shaving Foam	Liquid Soap	Shower Gel	Shower Conditioner	Body Care	Facial Care	Sunscreen
<b>Alkyl Silicones</b>																																	
Silsoft* ETS trisiloxane	Ethyl Trisiloxane	X	X	X	X	X	X	X	X	X	X															X	X				X	X	X
Silsoft 034 organosilicone fluid	Caprylyl Methicone								X	X				X					X						X		X	X	X	X	X	X	
<b>Silicone Polyacrylate Emulsion</b>																																	
Silsoft SurFace PF film former	Dimethicone PEG-8 Polyacrylate							X	X					X							X	X											
<b>Silicone Quats</b>																																	
Silsoft Q PF cationic aminosilicone terpolymer	Water (and) Silicone Quaternium-18 (and) Trideceth-6 (and) Trideceth-12											X	X			X	X				X	X	X	X	X			X	X	X			
Silsoft Care quat blend	Cyclopentasiloxane (and) Silicone Quaternium-18											X	X			X	X	X	X				X					X	X	X			
<b>Phenyl Modified Fluids</b>																																	
SF1550	Phenyltrimethicone	X	X	X	X	X			X	X	X								X	X		X			X					X	X	X	
SF1555	Bisphenylpropyl Dimethicone	X	X	X	X	X			X	X	X								X	X		X			X					X	X	X	
SilShine* 151 gloss additive	Phenylpropyldimethylsiloxysilicate	X	X	X	X	X	X		X	X	X	X	X			X			X	X		X			X					X	X	X	
<b>Aminofunctional Silicones/Amodimethicone</b>																																	
Silsoft A+ conditioning agent	PEG-40/PPG-8 Methylaminopropyl/Hydroxypropyl Dimethicone Copolymer											X	X	X		X	X				X	X	X	X									
Silsoft AX conditioning agent	Bis-Cetearyl Amodimethicone											X	X	X		X	X		X	X		X	X	X									
Silsoft AX-E conditioning agent	Bis-Cetearyl Amodimethicone (and) Cetareth-7 (and) Cetareth-25 <sup>(1)</sup>											X	X	X		X	X				X	X	X	X									
SF1708	Amodimethicone											X	X			X	X				X			X	X				X	X	X		
Silsoft A-843 copolymer	Bisamino PEG/PPG-41/3 Aminoethyl PG-Propyl Dimethicone											X	X			X	X							X	X				X	X	X		
Silsoft Tone color retaining conditioning agent	Polysilicone-18 Cetyl Phosphate											X	X	X		X	X			X				X					X	X	X		
<b>Aminofunctional Emulsions</b>																																	
Silsoft EMU 8110-N emulsion	Water (and) Dimethiconol (and) Amodimethicone (and) Bisamino PEG/PPG-41/3 Aminoethyl PG-Propyl Dimethicone (and) Laureth-4 (and) Laureth-5 (and) Laureth-23 (and) PEG-55 Stearate															X	X																
SM2658	Amodimethicone (and) Trideceth-12 (and) Glycerin (and) Cetrimonium Chloride											X	X	X	X		X							X				X	X				
SME253 PF	Amodimethicone (and) C11-15 Pareth-7 (and) Laureth-9 (and) Glycerin (and) Trideceth-12											X	X	X	X	X	X			X	X			X	X			X	X				
<b>Polyether Siloxane Copolymers</b>																																	
SF1188A	PEG/PPG-20/15 Dimethicone	X	X	X		X	X	X	X							X	X					X				X	X	X	X	X			
Silsoft 880 dimethicone copolyol	PEG-12 Dimethicone	X	X	X			X	X	X		X					X	X									X	X	X	X	X	X	X	
Silsoft 860 dimethicone copolyol	PEG-10 Dimethicone	X	X	X		X		X			X		X			X						X				X	X	X	X		X	X	
Silsoft 440 dimethicone copolyol	PEG-20/PPG-23 Dimethicone	X		X				X					X			X		X		X	X	X				X	X	X	X				
SF1288	PEG-12 Dimethicone			X				X					X			X										X	X	X	X				
Silsoft 895 dimethicone copolyol	PEG-17 Dimethicone										X		X			X										X	X	X	X				
Silsoft 900 dimethicone copolyol	PPG-12 Dimethicone								X				X							X													
Silsoft SEL fluid	Polysilicone-16 (and) Trideceth-5	X	X	X	X	X	X	X				X	X	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X	X	X	
Silsoft TT fluid	Polysilicone-17 (and) Trideceth-5 (and) Meroxapol 172	X	X	X	X	X	X	X				X	X	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X	X	X	
<b>Gum Fluid Blends</b>																																	
Silsoft 1215	Cyclopentasiloxane (and) Dimethiconol						X	X	X	X		X	X			X	X	X	X							X					X	X	X
SF1236	Dimethicone							X																							X	X	X
CF1251	Dimethicone										X					X		X															

Note: A full line of basic silicones is available, including oils, volatiles, gums and various blends. Please contact Customer Service for additional information.

(1) Proposed



28 **Silicone Specialties for Personal Care**  
Typical Physical Properties<sup>(1)</sup>

Product Category and Product Name	INCI Name	% Silicone	Viscosity @ 25°C	Specific Gravity @ 25°C	Flash Point °C (Closed Cup)	Refractive Index @ 25°C	Appearance
<b>Silicone Structurants/Sensory Enhancers</b>							
<b>Velviesil* 034 organosilicone gel</b>	Caprylyl Methicone (and) C30-45 Alkyl Cetearyl Dimethicone Crosspolymer	100	>100,000 cP	0.85	110	1.413	Clear to translucent gel
<b>Velviesil FX gel powder</b>	Cyclopentasiloxane (and) Boron Nitride (and) Caprylyl Methicone (and) C30-45 Alkyl Cetearyl Dimethicone Crosspolymer	70-90		0.959	77		White gel powder
<b>Velviesil Plus gel</b>	Cyclopentasiloxane (and) C30-45 Alkyl Cetearyl Dimethicone Crosspolymer (and) PEG/PPG-20/23 Dimethicone	100	>150,000 cP	0.95	77		Translucent gel
<b>Velviesil DM silicone</b>	Dimethicone (and) Cetearyl Dimethicone Crosspolymer	100	>65,000 cSt	0.96	135	1.399	Clear to translucent gel
<b>Velviesil 125 crosspolymer network</b>	Cyclopentasiloxane (and) C30-45 Alkyl Cetearyl Dimethicone Crosspolymer	100	>130,000 cP	0.95	77	1.399	Translucent gel
<b>Silsoft* silicone gel</b>	Cyclopentasiloxane (and) Cetearyl Dimethicone/Vinyl Dimethicone Crosspolymer	100	10,000-25,000 cP(2)	0.87	77		Clear, colorless gel
<b>SFE839</b>	Cyclopentasiloxane (and) Dimethicone/Vinyl Dimethicone Crosspolymer	100	10,000-30,000 cP(2)	0.95	82	1.396	Clear, colorless gel
<b>Silicone Spheres</b>							
<b>Tospearl* AQ microspheres</b>	Polymethylsilsesquioxane (and) Polyquaternium-7 (and) PEG-7 Glyceryl Cocoate (and) Methylsilanol Tri-PEG-8 Glyceryl Cocoate	>97		1.36			White powder
<b>Tospearl 150KA microspheres</b>	Polymethylsilsesquioxane	100		1.32			White, spiky powder
<b>Tospearl 1110A microspheres</b>	Polymethylsilsesquioxane	100		1.32			White, spherical powder
<b>Silsoft E-Pearl emulsion</b>	Polymethylsilsesquioxane (and) Dimethicone (and) Isohexadecane (and) PEG-40 Stearate (and) Cetearyl Methicone (and) Steareth-2 (and) Steareth-21	60	7,000 cP	1.02			White liquid
<b>Tospearl 120A microspheres</b>	Polymethylsilsesquioxane	100		1.32			White, spherical powder
<b>Tospearl 145A microspheres</b>	Polymethylsilsesquioxane	100		1.32			White, spherical powder
<b>Tospearl 2000B microspheres</b>	Polymethylsilsesquioxane	100		1.32			White, spherical powder
<b>Tospearl 3000A microspheres</b>	Polymethylsilsesquioxane	100		1.32			White, spherical powder
<b>Boron Nitride</b>							
<b>Momentive Softouch* CCS402 (BN) powder</b>	Boron Nitride			2.28			White crystal
<b>Momentive Softouch CC6097 (BN) powder</b>	Boron Nitride			2.28			White crystal
<b>Momentive Softouch CC6064 (BN) powder</b>	Boron Nitride (and) Dimethicone	3		2.19			White crystal
<b>Momentive Softouch CCS102 (BN) powder</b>	Boron Nitride			2.24		1.65 (in-plane)	White crystal
<b>Momentive Softouch CC6004 (BN) powder</b>	Boron Nitride			2.24		1.65 (in-plane)	White crystal
<b>Momentive Softouch CC6058 (BN) powder</b>	Boron Nitride			2.24		1.65 (in-plane)	White crystal
<b>Momentive Softouch CC6059 (BN) powder</b>	Boron Nitride			2.24		1.65 (in-plane)	White crystal
<b>Momentive Softouch CC6069 (BN) powder</b>	Boron Nitride			2.24		1.65 (in-plane)	White crystal
<b>Silicone Resins</b>							
<b>SilForm* Flexible resin</b>	Polymethylsilsesquioxane	100		1.24		238	White powder
<b>SR1000</b>	Trimethylsiloxysilicate	100					White powder
<b>SS4230</b>	Cyclopentasiloxane (and) Trimethylsiloxysilicate	100	70-200 cSt	1.05	>65.5	1.406	Clear, colorless liquid
<b>SS4267</b>	Dimethicone (and) Trimethylsiloxysilicate	100	300-700 cSt	1.025	201	1.409	Clear, colorless liquid
<b>Silsoft FR-5 fluid</b>	Trifluoropropyldimethylsiloxy/Trimethylsiloxy Silsesquioxane (and) Dimethicone	100	0.5 Pas max	1.045	190	1.406	Clear liquid
<b>SilForm FR-10 fluid</b>	Trifluoropropyldimethylsiloxy/Trimethylsiloxy Silsesquioxane (and) Dimethicone	100	0.4 Pas	1.06	190	1.406	Clear liquid
<b>Silsoft Style silicone</b>	Silica Dimethicone Silylate (and) TEA Dodecylbenzenesulfonate (and) PEG/PPG-5/3 Trisiloxane	20	10	1			White liquid
<b>Silicone Emulsifiers</b>							
<b>SF1528</b>	Cyclopentasiloxane (and) PEG/PPG-20/15 Dimethicone	100	250 cSt max.	0.959	77		Colorless liquid
<b>SF1540</b>	Cyclopentasiloxane (and) PEG/PPG-20/15 Dimethicone	100	10,000-50,000 cP	1.00	63	1.407	Cream to white liquid
<b>SilForm EOF emulsifier</b>	Polysilicone-25	95	2,000-10,000 cSt		102		Straw-colored liquid
<b>SilForm 60-A emulsifier</b>	PEG/PPG-20/15 Dimethicone (and) Diisopropyl Adipate	60	8,500 cP	0.96	104	1.4241	Transparent, straw-colored liquid
<b>Silicone Waxes</b>							
<b>SF1632</b>	Cetearyl Methicone	100		0.81	>100	1.459	White wax
<b>SF1642</b>	C30-45 Alkyl Dimethicone	100			>100		Tan-colored wax pastilles

Note: A full line of basic silicones is available, including oils, volatiles, gums and various blends. Please contact Customer Service for additional information.

(1) Typical data are average data. The actual values may vary. Product specifications for specific applications need to be agreed upon individually.

(2) Worked viscosity



30 **Silicone Specialties for Personal Care**

**Typical Physical Properties<sup>(1)</sup>**

Product Category and Product Name	INCI Name	% Silicone	Viscosity @ 25°C	Specific Gravity @ 25°C	Flash Point °C (Closed Cup)	Refractive Index @ 25°C	Appearance
<b>Alkyl Silicones</b>							
Silsoft* ETS trisiloxane	Ethyl Trisiloxane	>98	1.1 mPas 20°C	0.83	45		Clear, colorless liquid
Silsoft 034 organosilicone fluid	Caprylyl Methicone	100	3.3 cSt max.	0.83	110	1.413	Clear, colorless liquid
<b>Silicone Polyacrylate Emulsion</b>							
Silsoft SurFace PF film former	Dimethicone PEG-8 Polyacrylate	25	100–1,000 cP	1.02			Milky white to beige liquid
<b>Silicone Quats</b>							
Silsoft Q PF cationic aminosilicone terpolymer	Water (and) Silicone Quaternium-18 (and) Trideceth-6 (and) Trideceth-12	20	~100 mPas	0.99			Clear to slightly hazy liquid
Silsoft Care quat blend	Cyclopentasiloxane (and) Silicone Quaternium-18	100	4,000 cSt	0.95		1.369	Colorless to yellowish liquid
<b>Phenyl Modified Fluids</b>							
SF1550	Phenyltrimethicone	100	15–30 cSt	0.98	138 by DIN 51758	1.46	Clear, colorless liquid
SF1555	Bisphenylpropyl Dimethicone	100	5–25 cSt	0.968	>204	1.47	Clear, colorless liquid
SilShine* 151 gloss additive	Phenylpropyldimethylsiloxysilicate	100	280–1,000 cSt	1.07	238 by DIN 51757	1.51	Clear, slightly yellow liquid
<b>Aminofunctional Silicones/Amodimethicone</b>							
Silsoft A+ conditioning agent	PEG-40/PPG-8 Methylaminopropyl/Hydroxypropyl/Dimethicone Copolymer	30	10,000 cSt				Transparent to hazy liquid
Silsoft AX conditioning agent	Bis-Cetearyl Amodimethicone	100	5,000–20,000 cSt				Clear, colorless
Silsoft AX-E conditioning agent	Bis-Cetearyl Amodimethicone (and) Cetareth-7 (and) Cetareth-25 <sup>(2)</sup>	40	40–200 cP	1			Milky white liquid
SF1708	Amodimethicone	100	1,250–2,500 cSt	1.01	100		Clear to straw-colored liquid
Silsoft A-843 copolymer	Bisamino PEG/PPG-41/3 Aminoethyl PG-Propyl Dimethicone	30	5,000 cSt	1.01	67		Translucent, yellow liquid
Silsoft Tone color retaining conditioning agent	Polysilicone-18 Cetyl Phosphate	95	80,000–120,000 cSt	0.99	>110		Pale yellow, hazy liquid
<b>Aminofunctional Emulsions</b>							
Silsoft EMU 8110-N emulsion	Water (and) Dimethiconol (and) Amodimethicone (and) Bisamino PEG/PPG-41/3 Aminoethyl PG-Propyl Dimethicone (and) Laureth-4 (and) Laureth-5 (and) Laureth-23 (and) PEG-55 Stearate	50	10,000 cP	1.00			Milky white fluid
SM2658	Amodimethicone (and) Trideceth-12 (and) Glycerin (and) Cetrimonium Chloride	35		0.99	>100		Light yellow liquid
SME253 PF	Amodimethicone (and) C11-15 Pareth-7 (and) Laureth-9 (and) Glycerin (and) Trideceth-12	17–20	2,000 cP max.	1.00			White liquid
<b>Polyether Siloxane Copolymers</b>							
SF1188A	PEG/PPG-20/15 Dimethicone	100	800–1,400 cSt	1.04	>100	1.448	Clear, straw-colored liquid
Silsoft 880 dimethicone copolyol	PEG-12 Dimethicone	100	350–950 cSt	1.09	129	1.457	Pale yellow liquid
Silsoft 860 dimethicone copolyol	PEG-10/PEG-10 Dimethicone	100	174 cSt	1.002	132	1.442	Clear, straw-colored liquid
Silsoft 440 dimethicone copolyol	PEG-20/PPG-23 Dimethicone	100	1,700 cSt	1.023	97	1.447	Clear, pale yellow liquid
SF1288	PEG-12 Dimethicone	100	250–600 cSt	1.07	>150	1.45	Clear, colorless liquid
Silsoft 895 dimethicone copolyol	PEG-17 Dimethicone	100		1.078	140	1.453	Colorless wax
Silsoft 900 dimethicone copolyol	PPG-12 Dimethicone	100	250 cSt	0.989	112	1.435	Clear, straw-colored liquid
Silsoft SEL fluid	Polysilicone-16 (and) Trideceth-5	10	40–120 cP	1	116	1.4538	Clear, straw-colored liquid
Silsoft TT fluid	Polysilicone-17 (and) Trideceth-5 (and) Meroxapol 172	25	35–70 cP	0.989	160	1.4549	Clear, straw-colored liquid
<b>Gum Fluids Blends</b>							
Silsoft 1215	Cyclopentasiloxane (and) Dimethiconol	100	4,500–8,000 mPas	0.95	77	1.40	Clear, colorless liquid
SF1236	Dimethicone	100	3,000–5,000 cP	0.92	>135	1.40	Clear, colorless liquid
CF1251	Dimethicone	100	350,000–850,000 cP	0.97	148	1.40	Clear, colorless liquid

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(1) Typical data are average data. The actual values may vary. Product specifications for specific applications need to be agreed upon individually.

(2) Proposed



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