Gelest Formulary

FOR PERSONAL CARE & COLOR COSMETICS

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Night Moisturizer with Vertasil® TM-VE1

Vertasil® TM-VE1, a unique hybrid fluid, is created by adding a small siloxane segment to vitamin E. In skin care, it provides a rich feel with softening and moisturizing properties.

INCI Name	Ingredient	Supplier	Wt%
PHASE A			
Water	Deionized Water		q.s.
Carbomer	Carbopol ®Ultrez 10	Lubrizol	0.20
PHASE B			
Butylene Glycol			4.00
Polysorbate -60	Tween™ 60	Croda	1.00
Disodium EDTA			0.05
Water	Deionized Water		3.00
Tromethamine	Tris Amino®	Dow	1.00
PHASE C			
Octyldodecyl Stearate	Ceraphyl® ODS	Ashland	9.00
Tocopheryloxypropyl Trisiloxane	**Vertasil® TM-VE1**	**Gelest**	**5.00**
Stearic Acid	Emersol® 132	Emery	2.00
Glyceryl Stearate	Cerasynt® SD	Ashland	1.00
Sorbitan Stearate	Span™ 60	Croda	1.00
PHASE D			
Water	Deionized Water		q.s.
Preservative			q.s.
Fragrance			q.s.
		TOTAL	**100**

PROCEDURE

- Combine Phase A and disperse until thickened while heating to 75°C.
- Combine Phase B and add to Phase A.
- Combine Phase C and heat to 80°C under a slow stir.
- At 75°C, add Phase C to Phase AB and slowly homogenize until emulsified.
- Continue to mix while cooling.
- At 35°C, add Phase D and cool to RT while mixing.

Rev 2 (07232013) Formula GCA 2-98-1

Moisturizer with SPF and SiBrid® DE-12

SiBrid® DiEthicone DE-12 fluid is a light emollient that is an exceptional vehicle for pigment wetting and dispersions. It is compatible with organic compounds, including sunscreens, and provides improved spreading and blending to formulations.

INCI Name	Ingredient	Supplier	Wt%
PHASE A			
Polydiethylsiloxane	**SiBrid® DE-12**	**Gelest**	**7.00**
Titanium Dioxide	Sunscreen Grade Titanium Dioxide		5.00
PHASE B			
Water	Deionized Water		q.s.
Magnesium Sulfate			0.20
Butylene Glycol			6.00
Preservatives			q.s.
PHASE C			
Ethylhexyl Methoxycinnamate	Escalol® 557	Ashland	7.50
Octyldodecyl Stearate	Ceraphyl® ODS	Ashland	5.10
PEG/PPG 10/1 Cetyl Dimethicone	Abil® EM 90	Evonik	5.00
Myristyl Methicone	**AM-114**	**Gelest**	**2.50**
Beeswax	White Beeswax		1.00
Hydrogenated Castor Oil	Castor Wax® MP80	Vertellus	0.50
		TOTAL	**100**

PROCEDURE

- Disperse Phase A using a three roll mill.
- Combine Phase C and heat to 85°C. Cool to 70°C while mixing.
- Add Phase A to Phase C under slow homogenization.
- Combine first two ingredients in Phase B and stir until dissolved.
- Add remaining ingredients to Phase B and mix while heating Phase B to 70°C.
- At 70°C, slowly add Phase B to Phase AC and homogenize until emulsified.
- Mix for an additional 5 minutes while holding heat.
- Cool to 30°C with paddle blade.

Rev 2 (072313) Formula GCA1-57-1

Dry Skin Cream (W/O) with SiBrid® DE-23

SiBrid® DE-23 is a rich emollient that provides a cushiony and substantive feel to skincare products.

INCI Name	Ingredient	Supplier	Wt%
PHASE A			
Water	Deionized Water		q.s.
Magnesium Sulfate			0.20
Butylene Glycol			6.00
Preservative			q.s.
PHASE B			
Cyclopentasiloxane	DC® 245 Fluid	Dow Silicones	15.00
Polydiethylsiloxane	**SiBrid® DE-23**	**Gelest**	**10.00**
PEG-9 Polymethylsiloxyethyl Dimethicone	KF 6038	Shin-Etsu	4.00
Cyclopentasiloxane (&) Dimethicone/Vinyl Dimethicone Crosspolymer	USG 103	Shin-Etsu	3.00
PHASE C			
Laureth-7	Rhodasurf®L-7/90	Solvay	0.50
Preservative			q.s.
		TOTAL	**100**

PROCEDURE:

- Premix Phase A under propeller blade.
- Combine Phase B and homogenize slowly until homogenous.
- Premix Phase C and add to Phase B. Homogenization until blended.
- Slowly add Phase A to Phase BC under slow homogenization.
- Homogenize strongly for an additional 5 minutes.

Rev 1 (03262013) Formula GJH2-64-1

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Anti-Aging Moisturizing Serum with SPF

This serum has the application feel of a rich moisturizer without a heavy or greasy after feel. Tocopheryloxypropyl Trisiloxane (TM-VE1) adds emollience and softening benefits. Stearyl Methicone (TM-181), with a higher viscosity than caprylyl methicone, contributes to the serum's lubricious feel while providing a smooth application and weightless feel on skin. DiEthicone (DE-12) improves spreadability and eliminates tack.

INCI Name	Ingredient	Supplier	Wt%
PHASE A			
Stearyl Methicone	**SiBrid® TM-181**	**Gelest**	**8.30**
Polydiethylsiloxane	**SiBrid® DE-12**	**Gelest**	**3.00**
Tocopheryloxypropyl Trisiloxane	**SiBrid® TM-VE1**	**Gelest**	**1.00**
Polyglyceryl Oleate	Polyglyceryl Oleate		1.00
Glycol Distearate	Glycol Distearate		0.75
Magnesium Stearate	Magnesium Stearate		0.75
Cetyl PEG/PPG-10/1 Dimethicone	Jeesilc EM90	Jeen International	2.00
Homosalate	Homosalate		5.00
Octocrylene	Octocrylene		5.00
Avobenzone	Avobenzone		3.00
PHASE B			
Water	Deionized Water		q.s.
Propylene Glycol	Propylene Glycol		5.00
Sodium Chloride	Sodium Chloride		1.00
Water (&) Butylene Glycol (&) Portulaca Oleracea L. Extract	Purslane Extract	SK Bioland	q.s.
PHASE C			
Fragrance (Parfum)	Delicate Petals	Premier Specialties	q.s.
Preservative		Schülke	q.s.
		TOTAL	**100**

PROCEDURE:

- Combine Phase A while heating to 75°C .
- Combine Phase B and mix well until incorporated.
- Using a homogenizer, slowly add Phase B to Phase A.
- Finish with fragrance and preservative.
- SPF: not tested

Rev 1 (07112018) Formula TAR-01-003

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After Shower & Bath Oil with Vertasil® TM-L01

This mineral oil, dimethicone, and natural oil formulation demonstrates the use of Vertasil® TM-L01 as a compatibilizer to obtain a homogenous, transparent body oil that can be packaged into clear bottles. Vertasil® TM-L01 decreases tack in the formulation to produce a silkier, drier oil that quickly absorbs into the skin.

INCI Name	Ingredient	Supplier	Wt%
PHASE A			
Mineral Oil			23.00
Dimethicone			23.00
Carthamus Tinctorius (Safflower) Seed Oil			7.50
Prunus Amygdalus Dulcis (Sweet Almond) Oil	ParaOil™	Paradigm Science	7.50
Sesamum Indicum (Sesame) Seed Oil			11.50
Methylcyclohexenyl Isopropyl Trisiloxane	**Vertasil® TM-L01**	**Gelest**	**25.00**
PHASE B			
Fragrance			q.s.
Tocopherol	Vitamin E	DSM	0.50
Preservative			q.s.
		TOTAL	**100**

PROCEDURE:

- Mix Phase A under propeller blade.
- Add Phase B to Phase A and mix until uniform.

Rev 1 (050516 Formula LF4-091

Cleanser with Vertasil® VAN-07

Vertasil® VAN-07 is derived from the essential oil of tarragon and is tipped with a short emollient silicone tail. In a cleanser, it can replenish stripped oils leaving the skin feeling smooth and hydrated.

INCI Name	Ingredient	Supplier	Wt%
PHASE A			
Water	Deionized Water		q.s.
Carbomer	Carbopol® Ultrez 10	Lubrizol	0.20
Butylene Glycol			4.00
Polysorbate 60	Tween™ 60	Croda	1.00
Disodium EDTA			0.05
Water	Deionized Water		3.00
Tromethamine	Tris Amino®	Dow	1.00
PHASE B			
Octyldodecyl Stearate	Ceraphyl® ODS	Ashland	9.00
Bis(Methoxyphenylpropyl)/ Butyl Dimethicone	**Vertasil® VAN-07**	**Gelest**	**5.00**
Stearic Acid	Emersol® 132	Emery	2.00
Glyceryl Stearate	Cerasynt® SD	Ashland	1.00
Sorbitan Stearate	Span™ 60	Croda	1.00
PHASE C			
Fragrance		Schülke	q.s.
Preservative			q.s.
Water	Deionized Water		q.s.
		TOTAL	**100**

PROCEDURE:

- Combine water and carbomer and heat to 75°C under homogenization.
- Add the next three ingredients in order. Combine remaining ingredients and mix until clear. Add to batch and continue mixing.
- Under propeller blade, heat Phase B to 80-85°C.
- At 75°C, add Phase B to Phase A and slowly homogenize until emulsified and uniform.
- Cool under mixing.
- At 30°C, add Phase C and mix until dispersed.

Rev 2 (07232013) Formula GCA2-99-1

Body Wash with SiBrid® DE-12 & SiQube® Q1850

Add SiBrid® DE-12 DiEthicone to cleansers to produce a silky and hydrated afterfeel in products that strip the skin of natural oils. In bodywashes, SiQube® Q1850 acts as a conditioning agent that leaves a smooth feel on skin without the need to incorporate a large oil phase into the formula.

INCI Name	Ingredient	Supplier	Wt%
PHASE A			
Water	Deionized Water		q.s.
Acrylates Copolymer	Carbopol® Water SF1	Lubrizol	8.50
Sodium Lauryl Sulfate	Stepanol® WA-EXTRA	Stepan	30.00
Sodium Hydroxide			q.s.
Cocamidopropyl Betaine	Mirataine® BET C30	Solvay	10.00
PHASE B			
Glycerin			2.50
Polysilsesquioxane Steardimonium Chloride	**SiQube® Q1850**	**Gelest**	**0.25**
PHASE C			
Helianthus annuus (Sunflower) Seed Oil	Sunflower Oil		2.00
Polydiethylsiloxane	**SiBrid® DE-12**	**Gelest**	**1.00**
PHASE D			
Fragrance		Schülke	q.s.
Preservative			q.s.
Citric Acid			q.s.
Sodium Chloride			q.s.
		TOTAL	**100**

PROCEDURE:

- Mix water and copolymer under propeller blade until dispersed.
- Add SLS and mix slowly until dispersed.
- Adjust pH to 6.5-6.8 to thicken.
- Add cocamidopropyl betaine and mix slowly.
- Predisperse Phase B using shear. Add to Phase A and continue mixing.
- Add Phase C to Phase AB and mix well.
- In order, add Phase D ingredients and adjust pH to 5.5, if needed.
- Add sodium chloride to thicken batch and mix well.

Rev 2 (07232013) Formula LF1-019

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Pomegranate Body Lotion with SiBrid® DiEthicones

As an emollient, SiBrid® DE-15 provides a non greasy, light, and breathable feel to skin care products and can be used to reduce the tackiness of natural oils in formulations. SiBrid® DE-12 is soluble in common skincare ingredients, such as Caprylic/Capric Triglyceride, and solubilizes Vitamin E completely into the oil phase.

INCI Name	Ingredient	Supplier	Wt%
PHASE A			
Water	Deionized Water		q.s.
Xanthan Gum	Van Zan®	RT Vanderbilt	0.20
Glycerin			2.00
PHASE B			
Caprylic/ Capric Triglyceride			5.00
Helianthus annuus (Sunflower) Seed Oil	Sunflower Oil		4.00
Polydiethylsiloxane	**SiBrid® DE-15**	**Gelest**	**3.00**
Polydiethylsiloxane	**SiBrid® DE-12**	**Gelest**	**0.50**
Tocopherol	Vitamin E	DSM	0.50
Laureth-7	Rhodasurf® L-7/90	Solvay	1.50
Polyglyceryl-2 Sesquiisostearate	Hostacerin® DGI	Clariant	2.50
PHASE C			
Ammonium Acryloydimethyltaurate/ VP Copolymer	Aristoflex® AVC	Clariant	0.80
PHASE D			
Fragrance	Pomegranate		q.s.
Preservative		Schülke	q.s.
		TOTAL	**100**

PROCEDURE:

- In Phase A, premix gum and glycerin and add to water.
- Mix under high speed until gum is hydrated and dispersed.
- Premix DE-12 and Vitamin E and add to Phase B. Mix until uniform.
- Slowly add Phase B to Phase A. Mix with high speed to emulsify.
- Add Phase C and mix until thickened.
- Add Phase D and mix until dispersed.
- Adjust pH to 5.5 if necessary.

Rev 2 (110916) Formula LF2-089

Moisturizing Hand Cream with SiBrid® DE-23 DiEthicone

In hand creams, natural oils can feel greasy or too tacky. High melters often feel too waxy. The addition of DiEthicone DE-23, our highest viscosity silicone fluid, and Lauryl Methicone (TM-121) helps to eliminate those forumlation issues.

INCI Name	Ingredient	Supplier	Wt%
PHASE A			
Water	Deionized Water		q.s.
Glycerin	Glycerin		1.00
Disodium EDTA	Disodium EDTA		0.01
PHASE B			
Ethylhexyl Palmitate	Ethylhexyl Palmitate		3.50
ParaOil™ Plum Oil	Prunus Domestica (Plum) Oil	Paradigm Science	2.00
Lauryl Methicone	**SiBrid® TM-121**	**Gelest**	**2.00**
Cetyl Alcohol	Cetyl Alcohol		1.25
Stearyl Alcohol	Stearyl Alcohol		0.50
Steareth-21	Steareth-21		1.00
Steareth-2	Steareth-2		0.50
PHASE C			
Polyaccrylamide/C13-14 Isoparaffin/	Egel 305		2.00
Laureth-7			
Polydiethylsiloxane	**SiBrid® DE-23**	**Gelest**	**1.50**
Tocopheryloxpropyltrisiloxane	**Vertasil® TM-VE1**	**Gelest**	**1.00**
Fragrance	Sparkling Rose	Premier Specialties	q.s.
Preservative		Schülke	q.s.
		TOTAL	**100**

PROCEDURE:

- Combine Phase A ingredients and heat to 75°C.
- Combine Phase B ingredients and heat to 75°C.
- Using a homogenizer, slowly add Phase B to Phase A and emulsify.
- Cool batch to 40°C and add Phase C in order.
- Mix until thickened and uniform.

Rev 1 (071218) Formula TAR-01-005

MakeUp Remover with TM-031

Use Propyl Trisiloxane (TM-031) as a makeup solvent to clean up mascara, eyeliner, and other long-wearing or waterproof eye and face makeups in an instant.

INCI Name	Ingredient	Supplier	Wt%
PHASE A			
Water	Deionized Water		q.s.
Butylene Glycol	Butylene Glycol		5.00
Water/Butylene Glycol/ Portulaca Oleracea L. Extract	Purslane Extract	SK Bioland	0.50
FD&C Blue No. 1	Blue 1		q.s.
Preservative	Preservative	Schülke	q.s.
PHASE B			
Propyl Trisiloxane	**SiBrid® TM-031**	**Gelest**	**40.00**
Fragrance	Sparkling Rose	Premier Specialities	q.s.
		TOTAL	**100**

PROCEDURE:

- Under a propeller blade, combine Phase A ingredients and mix until uniform.
- Combine Phase B ingredients and mix until uniform.
- Add Phase B and Phase A into packaging.

Rev 1 (071218) Formula TAR-01-006

Long Wearing Eye Shadow with Super Resistant (SR) Pigments & SiBrid® DE-23

In eyeshadows, Polymethylsilsesquioxane (&) Trimethylsiloxysilicate (SR) treated pigments improve wear and skin adhesion due to low oil absorption and better H_2O repellancy. SR treated pigments and pearls greatly increase compressibility of powders without increasing the tendency for glazing.

INCI Name	Ingredient	Supplier	Wt%
PHASE A			
Mica (&) Trimethylsiloxysilicate	**SAA-SRA**	**Gelest**	**30.00**
Iron Oxides (&) Trimethylsiloxysilicate	**BIA-SRA**	**Gelest**	**4.00**
Iron Oxides (&) Trimethylsiloxysilicate	**RIA-SRA**	**Gelest**	**3.00**
Iron Oxides (&) Trimethylsiloxysilicate	**YIA-SRA**	**Gelest**	**3.00**
Talc (&) Trimethylsiloxysilicate	**TA7-SRA**	**Gelest**	**53.30**
Zinc Stearate	Zinc Stearate 921-G	Brenntag	3.00
Nylon-12	Orgasol®2002D	Vantage	2.00
Benzoic Acid			0.20
PHASE B			
Polydiethylsiloxane	**SiBrid® DE-23**	**Gelest**	**1.00**
Octyldodecyl Stearate	Ceraphyl® ODS	Ashland	0.50
		TOTAL	**100**

PROCEDURE:

- Mix Phase A for 3 x 15 seconds on high speed .
- Add Phase B and Mix for another 3 x 15 seconds.
- Press into pans.

Rev 1 (03262013) Formula GCA1-75-1

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Hot Pour Eyeshadow with DiEthicone (DE) Treated Pigments

DiEthicone (DE) treated pigments and minerals disperse easily into this hot-pour eyeshadow and help to contribute to the satiny, creamy texture and ease of application desired in eye area products.

INCI Name	Ingredient	Supplier	Wt%
PHASE A			
Isoeicosane	Permethyl 102A	Presperse	18.00
Isododecane	Permethyl 99A	Presperse	12.00
Hydrogenated Polyisobutene			5.75
Polydiethylsiloxane	**SiBrid® DE-12**	**Gelest**	**6.50**
Lauryl Methicone	**SiBrid® TM-121**	**Gelest**	**3.75**
Capric/Caprylylic Triglyceride & Disteardimonium Hectorite & Propylene Carbonate	Bentone Gel CCT	Elementis	9.10
PHASE B			
Copernicia Cerifera (Carnauba) Wax	Carnauba Wax	Koster Kuenen	3.65
Ozokerite		Strahl & Pitsch	1.25
PHASE C			
Titanium Dioxide (&) Polydiethylsiloxane	**WIA-DEA**	**Gelest**	**2.50**
Iron Oxides (&) Polydiethylsiloxane	**YIA-DEA**	**Gelest**	**3.60**
Iron Oxides (&) Polydiethylsiloxane	**RIA-DEA**	**Gelest**	**1.90**
Iron Oxides (&) Polydiethylsiloxane	**BIA-DEA**	**Gelest**	**0.60**
Talc (&) Polydiethylsiloxane	**TA7-DEA**	**Gelest**	**1.40**
Mica (&) Polydiethylsiloxane	**SAA-DEA**	**Gelest**	**25.00**
PHASE D			
Mica & Titanium Dioxide & Iron Oxide	Colorona Bronze	EMD/Rona	4.00
PHASE E			
Preservative/antioxidant			1.00
		TOTAL	**100**

PROCEDURE:

- Combine and mix Phase A under propeller blade until dispersed while heating to 80°C.
- Add Phase B and mix until melted and uniform.
- Preblend Phase C. Add Phase C to Phase AB and mix until dispersed and uniform.
- Add to Phase D to Phase ABC and mix until uniform. Add Phase E and mix until uniform. Pour at 80°C.

Rev 1 (042816) Formula LF4-092

Pearlescent Copper Eye Shadow with Silky Slip (SS) Pigments & SiBrid® DE-23

Alone or as part of a binder system, polydiethylsiloxanes offer excellent slip, spread, and blending of powdered cosmetics. Like dimethicones, diethicones improve water repellency, but are more lubricious, have increased cushion, and are more compatible with other cosmetic ingredients. The stearyl triethoxysilane (SS) surface treated pigments and pearls help contribute to longer wear on skin and a softer feel.

INCI Name	Ingredient	Supplier	Wt%
PHASE A			
Talc (&) Stearyl Triethoxysilane	**TA7- SSA**	**Gelest**	**20.80**
Nylon-12	Orgasol 2002D Nat Cos	Vantage	8.00
Zinc Stearate	Zinc Stearate 921-G	Brenntag	5.00
Iron Oxides (&) Stearyl Triethoxysilane	**YIA-SSA**	**Gelest**	**4.00**
Iron Oxides (&) Stearyl Triethoxysilane	**RIA-SSA**	**Gelest**	**3.00**
Iron Oxides (&) Stearyl Triethoxysilane	**BIA-SSA**	**Gelest**	**3.00**
Sodium Benzoate			0.20
PHASE B			
Iron Oxides & Mica (&) Titanium Dioxide (&) Stearyl Triethoxysilane	**Cloisonné Copper, SS treated**	**BASF/Gelest**	**50.00**
PHASE C			
Ethylhexyl Palmitate	Ceraphyl™ 368	Ashland	3.00
Polydiethylsiloxane	**DE-23**	**Gelest**	**3.00**
		TOTAL	**100**

PROCEDURE:

- Combine Phase 1 and mix well.
- Mill at high speed until no undispersed color remains.
- Add Phase 2 with gentle agitation.
- Combine and spray on Phase 3 while agitating.
- Mill through a coarse screen to disperse.
- Press into pans.

Rev 2 (110816) Formula LD1-157-2

Powder Cream Concealer with Maximum Loading (ML) Pigments & Seribrite™ SS

This high coverage formula applies like a cream, yet has the dry feel of a powder. Dimethicone ML pigments allow for higher pigment loading due to low oil absorption and excellent wetting proprieties. Seribrite™ SS is added as a Boron Nitride alternate due to its whiteness, slip, and creamy feel upon application.

INCI Name	Ingredient	Supplier	Wt%
PHASE A			
Ethylhexyl Palmitate	Ceraphyl® 368	Ashland	12.00
Tribehenin	Syncrowax™ HRC	Croda	4.50
C30-45 Alkyl Methicone	AMS C-30	Dow Silicones	4.50
C20-40 Alcohols	Performacol™ 425	New Phase Technologies	0.25
Benzoic Acid			0.10
Ascorbyl Palmitate			0.05
PHASE B			
Ethylhexyl Palmitate	Ceraphyl® 368	Ashland	20.60
Polyglyceryl-3 Diisostearate	Cithrol™ PG3D2	Croda	1.00
Quaternium-18 Hectorite	Bentone® 38V	Elementis	0.20
Titanium Dioxide (&) Dimethicone PEG-3 Laurate	**WIA-MLA**	**Gelest**	**19.70**
Iron Oxides (&) Dimethicone PEG-3 Laurate	**YIA-MLA**	**Gelest**	**2.50**
Iron Oxides (&) Dimethicone PEG-3 Laurate	**RIA-MLA**	**Gelest**	**0.85**
Iron Oxides (&) Dimethicone PEG-3 Laurate	**BIA-MLA**	**Gelest**	**0.15**
Talc (&) Dimethicone PEG-3 Laurate	**TA7-MLA**	**Gelest**	**18.60**
Mica (&) Stearyl Triethoxysilane	**Seribrite™ SAB-SSA**	**Gelest**	**15.00**
		TOTAL	**100**

PROCEDURE:

- Combine Phase A and heat to 80°C under stirring.
- Add Phase B and mix on three roll mill to disperse.
- Reheat to 70°C and pour.

Rev 1 (08152016) Formula LF1-029

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Satin Feel Foundation with SiBrid® DE-12 & Silky Slip (SS) Treated Pigments

Gelest's Silky Slip (SS) pigments and SiBrid® DE-12 promote easier spreading and blending on skin while providing an exceptionally soft and moist afterfeel to liquid foundations. SiBrid® DE-12 DiEthicone is an excellent vehicle for wetting and dispersing pigments.

INCI Name	Ingredient	Supplier	Wt%
PHASE A			
Water	Deionized Water		49.10
Magnesium Sulfate			0.20
PHASE B			
Butylene Glycol			6.00
Benzoic Acid			0.20
PHASE C			
Polydiethylsiloxane	**SiBrid® DE-12**	**Gelest**	**5.00**
Cyclopentasiloxane	DC 245 Fluid	Dow Silicones	5.00
Lauryl PEG-9 Polydimethylsiloxyethyl Dimethicone	KF 6038	Shin-Etsu	3.00
Cyclopentasiloxane & C30-45 Alkyl Cetearyl Dimethicone Crosspolymer	Velvesil 125	Momentive	10.00
PHASE D			
Laureth-7	Rhodasurf L-7/90	Solvay	0.50
PHASE E			
Polydiethylsiloxane	**SiBrid® DE-12**	**Gelest**	**12.00**
Titanium Dioxide (&) Stearyl Triethoxysilane	**WIA-SSA**	**Gelest**	**8.00**
Talc (&) Stearyl Triethoxysilane	**TA7-SSA**	**Gelest**	**4.10**
Iron Oxides (&) Stearyl Triethoxysilane	**YIA-SSA**	**Gelest**	**1.20**
Iron Oxides (&) Stearyl Triethoxysilane	**RIA-SSA**	**Gelest**	**0.50**
Iron Oxides (&) Stearyl Triethoxysilane	**BIA-SSA**	**Gelest**	**0.20**
		TOTAL	**100**

PROCEDURE:

- Mix Phase A under propeller blade. Premix Phase B while warming to dissolve.
- Add Phase B to Phase A and stir. Premix first three ingredients in Phase C. When uniform, add remaining ingredient and slowly homogenize.
- Add Phase D to Phase C and homogenize.
- Premill Phase E. Add Phase E to Phase CD and homogenize until dispersed.
- Add Phase AB to Phase CDE and continue homogenizing until emulsified.
- Increase speed and homogenize for additional 5 minutes.

Rev 2 (07232013) Formula GCA2-22-1

Gelest
Enabling Your Technology

Velvety Concealer with Hydrosperse (HS) Pigments

In water based systems, Hydrosperse (HS) pigments disperse easily without high shear, develop fully in color and tinting strength, and show reduced color flotation.

INCI Name	Ingredient	Supplier	Wt%
PHASE A			
Water	Deionized Water		q.s.
Polysorbate 60	Tween™ 60	Croda	0.10
Magnesium Aluminum Silicate	Veegum®	RT Vanderbilt	0.70
Sodium Lithium Magnesium Silicate	Laponite® XLG	Rockwood	0.30
PHASE B			
Titanium Dioxide (&) Disodium Carboxyethyl Siliconate	**WIA-HSA**	**Gelest**	**16.00**
Iron Oxides (&) Disodium Carboxyethyl Siliconate	**YIA-HSA**	**Gelest**	**1.60**
Iron Oxides (&) Disodium Carboxyethyl Siliconate	**RIA-HSA**	**Gelest**	**0.60**
Iron Oxides (&) Disodium Carboxyethyl Siliconate	**BIA-HSA**	**Gelest**	**0.16**
Talc (&) Disodium Carboxyethyl Siliconate	**TA7-HSA**	**Gelest**	**1.64**
PHASE C			
Butylene Glycol			6.00
Cellulose Gum	CMC7H3SF	Evonik	0.10
Polysorbate 60	Tween™ 60	Croda	0.40
Preservative			q.s.
PHASE D			
Potassium Cetyl Phosphate	Amphisol® K	DSM	2.00
PHASE E			
Polydiethylsiloxane	**SiBrid® DE-12**	**Gelest**	**12.00**
Ethylhexyl Palmitate	Ceraphy® 368	Ashland	5.00
Glyceryl Stearate	Cerasynt® SD	Ashland	1.50
Sorbitan Stearate	Span™ 60	Croda	1.00
Preservative			q.s.
		TOTAL	**100**

PROCEDURE:

- In order, add Phase A ingredients to water and homogenize while heating to 70°C.
- Once hydrated, add Phase B and continue mixing.
- In Phase C, premix butylene glycol and gum, add to Phase AB, and homogenize. Add remainder of Phase C to Phase ABC.
- Slowly mix Phase D into batch until dissolved and continue homogenization at 80°C. Combine Phase E and heat to 80°C. Slowly add Phase E to Phase ABCD. Homogenize for 15 minutes at 80°C. Cool under mixing to 30°C.

Rev 1 (03262013) Formula GCA2-35-1

Gelest
Enabling Your Technology

Cucumber Smoothie Color Correcting Primer with Vertasil® TM-L01, SiBrid® DE-12, & SiBrid® PM-212

Banish embarrassing facial redness and and soften those worry lines and wrinkles over your cyclopentasiloxane (D_5) concerns. Gelest's Limoneyltrisiloxane, Vertasil® TML-01, as used in this Cucumber Smoothie Primer, can provide a similar light weight, non oily feel during application with more substantive and silkier after feel than cyclopentasiloxane. This primer can be used alone as a soft focus and color correcting serum or as a primer under makeup.

Name	Ingredient	Supplier	Wt%
PHASE A			
Dimethicone/Vinyl Dimethicone Crosspolymer			q.s.
Polydiethylsiloxane	**SiBrid® DE-12**	**Gelest**	**15.00**
Methylcyclohexenyl Isopropyl Trisiloxane	**Vertasil® TM-L01**	**Gelest**	**15.00**
Lauryl Phenylpropyl Methicone	**SiBrid® PM-212**	**Gelest**	**2.00**
Tocopherol	Vitamin E	DSM	1.00
Actives			q.s.
PHASE B			
Polydiethylsiloxane	**SiBrid® DE-12**	**Gelest**	**1.00**
Chromium Oxide Green (&) Stearyltriethoxysilane	**GIA-SSA**	**Gelest**	**0.10**
PHASE C			
Mica (&) Titanium Dioxide (&) Iron Oxides (&) Stearyltriethoxysilane	**PDA-SSA**	**Gelest**	**2.50**
Nylon-12 (&) Sodium Hylauronate	Orgasol® Hydra	Vantage	2.50
Methyl Methacrylate Crosspolymer			2.50
Fragrance	Cucumber & Green Tea	The Lebermuth Co	0.20
Preservative			q.s.
		TOTAL	**100**

PROCEDURE:

- Mix Phase A under propeller blade.
- Predisperse Phase B. Add Phase B to Phase A and mix until uniform.
- In order, add Phase C to Phase AB and mix until dispersed and uniform.

Rev 1 (041414) Formula LF-080

Gelest
Enabling Your Technology

Moisturizing & Long-Wearing CC Cream

To create a long-wearing & light weight W/O CC cream, incorporate our silicone resin (SR) treated pigments by prewetting with DiEthicone DE-12, an oxygen permable silicone fluid that can be used as wetting agent, slip agent, and oil phase fluid. Caprylyl Methicone (TM-081) adds additional play time & slip upon application while Propyl Trisiloxane (TM-031) is used as an oil phase solvent.

INCI Name	Ingredient	Supplier	Wt%
PHASE A			
Polydiethylsiloxane	**SiBrid® DE-12**	**Gelest**	**6.00**
Titanium Dioxide & Trimethylsiloxysilicate	**WIA-SRA**	**Gelest**	**6.30**
Iron Oxides & Trimethylsiloxysilicate	**YIA-SRA**	**Gelest**	**1.25**
Iron Oxides & Trimethylsiloxysilicate	**RIA-SRA**	**Gelest**	**0.35**
Iron Oxides & Trimethylsiloxysilicate	**BIA-SRA**	**Gelest**	**0.25**
Ultramarines & Trimethylsiloxysilicate	**LIA-SRA**	**Gelest**	**0.05**
Ethylhexyl Palmitate	Ethylhexyl Palmitate		5.00
Caprylyl Methicone	**SiBrid® TM-081**	**Gelest**	**5.00**
Propyl Trisiloxane	**SiBrid® TM-031**	**Gelest**	**5.00**
Cetyl PEG/PPG-10/1 Dimethicone	Jeensilc EM90	Jeen Int'	2.30
Polyglyceryl Oleate	Polyglyceryl Oleate		1.00
Sodium Chloride	Sodium Chloride		1.00
Tocopheryloxypropyltrisiloxane	**SiBrid® TM-VE1**	**Gelest**	**0.75**
Glycol Distearate	Glycol Distearate		q.s.
PHASE B			
Water	Deionized Water		q.s.
Propylene Glycol	Propylene Glycol		5.00
Sodium Chloride	Sodium Chloride		1.00
Water / Butylene Glycol / Portulaca Oleracea L. Extract	Purslane Extract	SK Bioland	q.s.
Fragrance	Delicate Petals	Premier Specialties	q.s.
Preservative		Schülke	q.s.
		TOTAL	**100**

PROCEDURE:

- Combine Phase A and heat to 75°C.
- Combine Phase B and mix well until incorporated.
- Under a homogenizer, slowly add Phase B into Phase A and mix until emulsified.
- Sweep while cooling batch.
- Finish with fragrance and preservative.

Rev 1 (071218) Formula TAR-01-004

Perfect Lips Lip Gloss “Rosalinda”

This sheer, high gloss lipgloss is the perfect color for everyone! Stearyl Triethoxysilane (SS) treated pigments add to the cushiony texture while Tocopheryloxypropyltrisiloxane (TM-VE1) softens and conditions lips.

INCI Name	Ingredient	Supplier	Wt%
PHASE A			
Hydrogenated Polyisobutene/ Ethylene/ Propylene/ Styrene Copolymer (&) Butylene/Ethylene/Styrene Copolymer	Versagel® ME 500	Calumet Penreco	q.s.
Stearyl Behenate	Purester 40	Strahl & Pitsch	4.15
Tocopheryloxypropyltrisiloxane	**Vertasil® TM-VE1**	**Gelest**	**1.00**
Prunus Domestica (Plum) Seed Oil	ParaOil™ Plum Oil	Paradigm Science	1.00
PHASE B			
Polydiethylsiloxane	**SiBrid® DE-23**	**Gelest**	**4.50**
Titanium Dioxide (&) Stearyl Triethoxysilane	**WIA-SSA**	**Gelest**	**5.20**
Iron Oxides (&) Stearyl Triethoxysilane	**RIA-SSA**	**Gelest**	**2.40**
Iron Oxides (&) Stearyl Triethoxysilane	**YIA-SSA**	**Gelest**	**0.10**
Iron Oxides (&) Stearyl Triethoxysilane	**BIA-SSA**	**Gelest**	**0.80**
PHASE C			
Flavor	Sweet Rose	Premier Specialties	q.s.
Stevia Rebaudiana Extract	Sweetener		
Preservative	Preservative	Schülke	q.s.
		TOTAL	**100**

PROCEDURE:

- Under a propeller blade, mix Phase A ingredients while heaCng to 75-80°C.
- Predisperse Phase B ingredients.
- Add Phase B to Phase A and mix unCl dispersed.
- Once dispersed, cool and add Phase C.

Rev 1 (071318) Formula TAR-01-002

Lipstick with SiBrid® TM-081

In lipsticks, SiBrid® TM-081 helps to achieve a lighter, more comfortable feel in addition to creating initial slip and improving glide on application.

INCI Name	Ingredient	Supplier	Wt%
PHASE A			
Pigment			7.50
Ricinus Communis (Castor) Seed Oil	Crystal® O	Vertellus	7.50
PHASE B			
Triisostearyl Citrate	Schercemol® TISC	Lubrizol	37.80
Octyldodecyl Stearate	Ceraphyl® ODS	Ashland	10.80
Euphoria Cerifera (Candelilla) Wax	Candelilla Wax	Frank B. Ross	7.60
Ricinus Communis (Castor) Seed Oil	Crystal® O	Vertellus	6.70
Caprylyl Methicone	**SiBrid® TM-081**	**Gelest**	**5.40**
Microcrystalline Wax	Microcrystalline Wax SP19	Strahl & Pitsch	3.80
Ozokerite	Ozokerite 170D	Frank B. Ross	2.15
Antioxidants			q.s.
Preservatives			q.s.
PHASE C			
Mica			8.00
		TOTAL	**100**

PROCEDURE:

- Disperse Phase A using a roller mill.
- Combine Phase B and heat to 80°C. Once melted, slowly stir under propeller blade.
- Add Phase A and continue stirring for 45 minutes or until dispersed.
- Add Phase C and stir until dispersed and desired pouring temperature is reached.
- Pour into mold.

Rev 1 (03262013) Formula GCA1-19-3

Conditioning Lipstick with Vertasil® TM-VE1, TC Treated Pigments, & SS Treated Pearl

Unlike many silicones and silicone derivatives, Vertasil® TM-VE1 is easily incorporated into lip products due to its solubility of in a range of polar compounds, including castor oil. The benefits of Vertasil® TM-VE1 in lip products include conditioning, softening, and protection against the drying effects of the environment. The Triethoxycaprylylsilane (TC) surface treated pigments are easy to disperse into oil and improve wear on the lips. Stearyl triethoxysilane (SS) pearls have a more luxurious feel with improved adhesion vs. untreated pearls.

INCI name	Ingredient	Supplier	%
PHASE A			
Euphoria Cerifera (Candelilla) Wax	Candelilla	Ross Wax	6.00
Microcrystalline Wax	Microwax SP 19	Strahl & Pitsch	3.00
Ozokerite	Ozokerite 170D	Ross Wax	2.00
Copernicia Cerifera (Carnauba) Wax	Carnauba Wax	Strahl & Pitsch	1.00
Triisostearyl Citrate	Schercemol™ TISC	Lubrizol	30.00
Ricinus Communis (Castor) Seed Oil	Crystal O®	Vertellus	13.50
Octyldodecanol	Eutanol G®	BASF Care Creations	5.00
Octyldodecyl Stearate	Ceraphyl™ ODS	Ashland	7.50
Tocopheryloxypropyl Trisiloxane	**Vertasil® TM-VE1**	**Gelest**	**2.50**
Methylparaben			0.20
Propylparaben			0.10
PHASE B			
Ricinus Communis (Castor) Seed Oil	Crystal O®	Vertellus	10.00
Iron Oxides (&) Triethoxycaprylylsilane	**RIA-TCA**	**Gelest**	**6.50**
Titanium Dioxide (&) Triethoxycaprylylsilane	**WIA-TCA**	**Gelest**	**2.50**
Blue 1 Lake	C39-4433	Sun Chemical	0.10
Red 7 Lake	C19-7711	Sun Chemical	0.75
Red 6 Lake	C19-7712	Sun Chemical	1.35
PHASE C			
Mica & Titanium Dioxide (&) Silica (&) Stearyl Triethoxysilane	**SS Treated Timiron® Splendid Red**	**EMD/Gelest**	**8.00**
		TOTAL	**100**

PROCEDURE

- Combine Phase A and heat to 80-85C. Slowly stir under a propeller blade. Hold temperature.
- Disperse Phase B using a roller mill.
- Once Phase A is melted, add Phase B to Phase A and stir until pigments are fully dispersed.
- Add Phase C and stir until dispersed and uniform. Cool to pouring temperature while mixing, and then pour.

Rev 1 (011072016) Formula LF4-146

Eyeliner with Hydrosperse (HS) Pigments

Gelest's Hydrosperse (HS) surface treated pigments disperse without milling to give fine pigment particle size and full color development.

INCI Name	Ingredient	Supplier	Wt%
PHASE A			
Water	Deionized Water		69.49
Butylene Glycol			6.00
Preservative			0.30
PHASE B			
Water	Deionized Water		4.00
Tromethamine	Tris Amino®	Dow	1.00
PHASE C			
Shellac		Mantrose-Haeuser	1.00
PHASE D			
Hydroxyethylcellulose	Natrosol ™250 MR	Ashland	0.50
PHASE E			
Iron Oxides (&) Disodium Carboxyethyl Siliconate	**BIA-HSA**	**Gelest**	**10.00**
PHASE F			
Cera Alba	White Beeswax		4.00
Cetyl Alcohol	Alfol™ 16	Sasol	1.25
Sorbitan Stearate	Span™ 60	Croda	1.00
Copernica Cerifera (Carnauba) Wax	Carnauba Wax		0.50
Hydrogenated Polyisobutene	Panalane® H-300E	Lipo	0.50
Preservative			0.10
PHASE G			
Preservative			q.s.
Water	Deionized Water		q.s.
		TOTAL	**100**

PROCEDURE:

- Combine Phase F and heat to 85-90°C. Combine Phase A and heat to 50°C. Premix Phase B and add to Phase A. Add Phase C to Phase AB and stir slowly until dissolved.
- Add Phase D to Phase ABC and homogenize while increasing heat to 80°C.
- At 80°C, add Phase E to Phase ABCD and heat to 85-90°C while homogenizing.
- When Phase ABCDE and Phase F reach 85-90°C, add Phase F to Phases ABCDE under homogenization. Hold temperature and mix for additional 15 minutes. Cool to 45°C and add Phase G. Continue to cool to 30°C.

Rev 1 (03262013) Formula GCA2-40-2

Waterproof Mascara with Super Resistant (SR) Pigments

Super Resistant (SR) surface treated pigments increase water resistance and adhesion to lashes while reducing smudging.

INCI Name	Ingredient	Supplier	Wt%
PHASE A			
Isododecane	Permethyl® 99A	Presperse	23.05
Polyethylene	A-C® Polyethylene 6A	Honeywell	11.00
Euphoria Cerifera (Candelilla) Wax	Candelilla Wax	Frank B. Ross	4.50
Polyglycerol-3 Diisostearate	Prisorine™ 3700	Croda	0.25
Benzoic acid			0.20
PHASE B			
Pentaerythrityl Rosinate		Ashland	2.00
Isododecane	Permethyl Fluid 99A	Presperse	2.00
PHASE C			
Zinc Stearate	Zinc Stearate 921-G	Brenntag	1.00
Silica Silylate	**SIS6962.1M20**	**Gelest**	**12.00**
PHASE D			
Isododecane	Permethyl® 99 A	Presperse	8.00
Iron Oxide (&) Trimethylsiloxysilicate	**BIA-SRA**	**Gelest**	**12.00**
PHASE E			
Petroleum Distillates (&) Distearyldimonium Hectorite (&) Propylene Carbonate	Bentone Gel® SS-71	Elementis	35.00
		TOTAL	**100**

PROCEDURE:

- Combine Phase B in a closed vessel and stir slowly until uniform.
- Combine Phase D and mill using high shear agitation.
- Combine Phase A in a closed vessel. Heat to 95°C with stirrring until clear.
- Add Phase B with stirring.
- Add Phase C and homogenize until dispersed.
- Add Phase D and homogenize until dispersed.
- Add Phase E and homogenize until dispersed.
- Stir with sidesweep agaiation while cooling to 30°C.

Rev 1 (03262013) Formula GCA1-83-1

FOR ADDITIONAL

PRODUCT

INFORMATION

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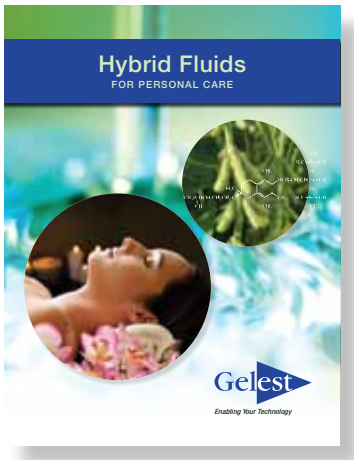

ADDITIONAL GELEST LITERATURE

HYDROPHOBICITY, HYDROPHILICITY AND SILANE SURFACE MODIFICATION
Organosilanes are used extensively for modification of Surface properties. This 80 page brochure describes silane surface modification with an emphasis on making surfaces hydrophobic or hydrophilic.

SILICONE FLUIDS – STABLE INERT MEDIA
Design and Engineering properties for conventional silicone fluids as well as thermal, fluorosilicone, hydrophilic and low temperature grades are presented. The brochure provides data on thermal, rheological, electrical, mechanical and optical properties for silicones. Silicone fluids are available in viscosities ranging from 0.65 to 2,500,000 cSt.

REACTIVE SILICONES – FORGING NEW POLYMER LINKS
Reactive silicones that can be formulated into coatings, membranes, cured rubbers and adhesives for mechanical, optical, electronic and ceramic applications. Information on reactions and cures of silicones as well as physical properties shortens product development time for chemists and engineers.

GELEST 5000-A SILICON COMPOUNDS: SILANES & SILICONES
Detailed chemical properties and reference articles for over 1500 compounds. This handbook of silane and silicone chemistry includes scholarly reviews as well as detailed application information.

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