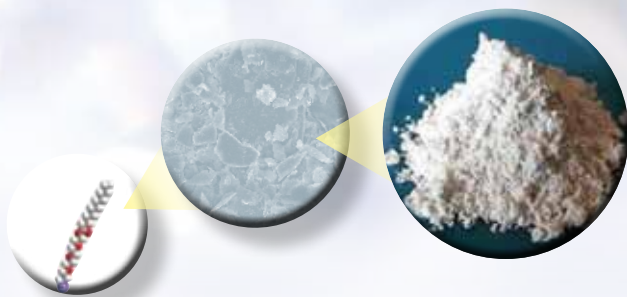


TAILORING SURFACES FOR

Cosmetic Innovation



Gelest

Enabling Your Technology



Enabling Your Technology

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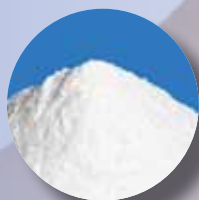
Yellow Iron Oxide



Black Iron Oxide



Red Iron Oxide



Mica



Talc



Titanium Dioxide



Tailoring Surfaces for Cosmetic Innovation

Tailoring Surface chemistry of pigments and powders provides robust, permanently modified behavior, expanding formulation latitude in personal care. Gelest has the unique ability to synthesize specialty silanes and silicones and employ these materials as reactive surface treatments to tailor properties of surfaces. This surface chemistry has demonstrated exceptional performance in color cosmetic and skin care applications.

- Stable throughout the range of physiological pH
- Precise Surface Energy Control
- Water Repellent – Hydrophobic
- Water Dispersible – Hydrophilic
- Oil and Water Repellent – Oleophobic and Hydrophobic
- Balanced Lipophilicity – Stable Interaction with siloxane, organic and aqueous phases
- Dispersion and Rheological Control
- Lubricious Tactile Effect

Gelest offers six novel surface treatments along with conventional silane and siloxane surface treatments. These can be applied to a variety of inorganic structures including siliceous and non-siliceous powders and pigments.

Gelest SS – Silky Slip

Gelest HS – Hydrosperse

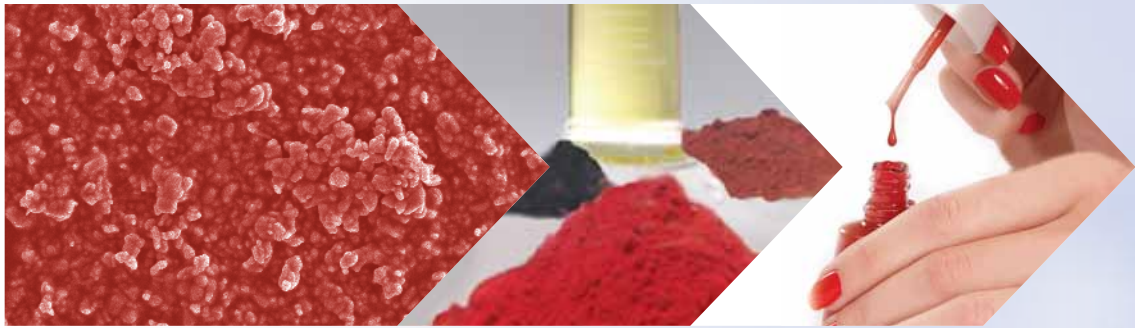
Gelest SR – Super Resistant

Gelest ML – Maximum Loading

Gelest AS – Polymeric C8

Gelest TC – C8 silane

Gelest DE – Diethicone



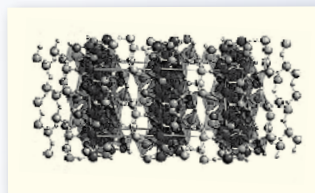
Tailoring the Particle to the Formula

Gelest has the unique capability to create new chemistry to modify the surface characteristics of particles, allowing a match to specific application requirements. Utilizing novel organosilicon compounds synthesized at Gelest, a series of surface modified pigments have been developed to address the changing formulation requirements of color cosmetics.

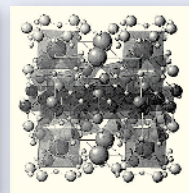
Innovative Particle Functionalization

Gelest provides micro-particle modifications that dramatically enhance:

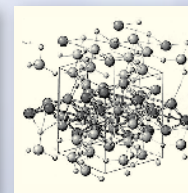
- Color
- Polarity
- Adhesion
- Dispersion
- Rheological Behavior
- Photochemical, Thermal Stability



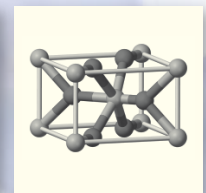
Talc



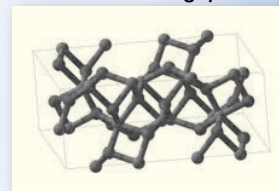
Phlogopite



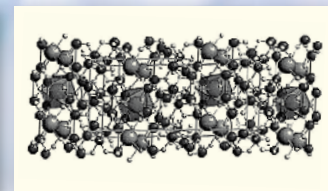
Kaolinite



Titanium Dioxide



Red Iron Oxide



Muscovite

Inputs

Particle

SILICEOUS	natural synthetic
NON-SILICEOUS	natural synthetic
SPECIALTY	metallic fluorescent luminescent phosphorescent

Physical Considerations

Physical Properties

Density
Aspect Ratio
Surface Area
Contact Angle
Chemisorption
Electrophoretic Mobility
Pore Size & Volume
Particle Size Distribution

Chemical Considerations

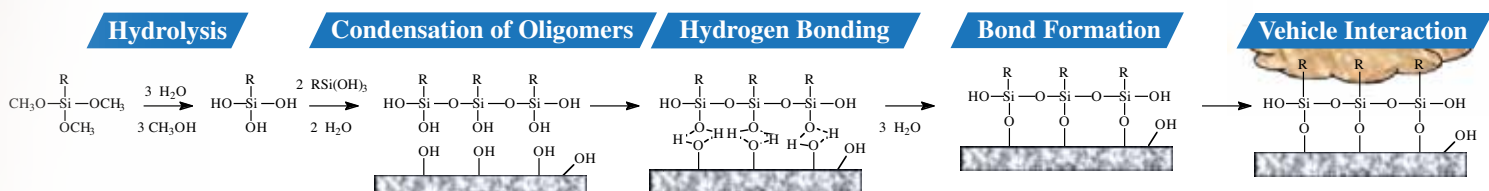
Surface Properties

Oleophilicity
Oleophobicity
Zeta Potential
Hydrophilicity
Hydrophobicity
Lubricity

Bonding Mechanisms

Ionic Bonding
Metallic Bonding
Covalent Bonding
Aromatic Bonding
Hydrogen Bonding
Acid Base Interactions
Crystallinity Modification
Wetting & Surface Area Effects

Surface Functionalization



Gelest SS – Silky Slip

INCI NAME: Stearyl Triethoxysilane

The stearyl silane imparts the excellent wetting properties of the shorter chain silanes with more emollient skin feel in powders and dispersed systems.

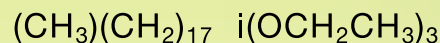
SS KEY PERFORMANCE BENEFITS

- Lubricious skin feel and aesthetics
- Enhanced compressibility in pressed powders
- Water repellency
- Improved wetting and dispersion capability
- Improved skin adhesion
- Enhanced cushion due to treatment melt point similar to skin temperature

RECOMMENDED APPLICATIONS

- Loose Powders
- Pressed Powders
- Water-in-Silicone Foundations
- Water-in-Oil Foundations
- Powdercream products
- Sunscreens

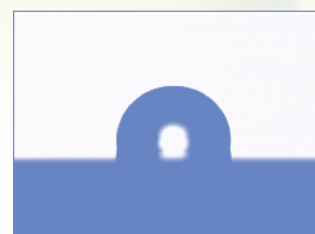
FORMULATIONS



SS treated powders are hydrophobic and resist wetting by water. (Ultramarine Blue SS)



Water Drop on
Untreated Glass Surface



Water Drop on SS Surface
Treated Glass Surface



Eye Shadow

The skin feel of eye shadow made with Stearyl Triethoxysilane (SS) treated pigments is exceptionally moist and soft. The long chain stearylsilane is effective in improving compressibility of pigments and pearls while improving skin adhesion.

INCI Name	Ingredient (Supplier)	Wt%
Talc (& Stearyl Triethoxysilane	TA7-SSA	17.00
Titanium Dioxide (& Stearyl Triethoxysilane	WIA-SSA	8.00
Manganese Violet (& Stearyl Triethoxysilane (& Methicone	VIA-SSH	7.00
Carmine (& Stearyl Triethoxysilane (& Methicone	Carmine, SSH treated	7.00
Zinc Stearate	Zinc Stearate 921-G (Brenntag)	3.80
Nylon-12	Orgasol® 2002D (Lipo)	3.00
Benzoic Acid		0.20
Mica & Titanium Dioxide (& Ferric Ferrocyanide (& Stearyl Triethoxysilane	Cloisonne™ Violet (BASF), SS treated	49.00
Polydiethylsiloxane	SiBrid® DE-23	2.00
Octyldodecyl Stearate	Ceraphyl® ODS (Ashland)	2.00
Fluorophlogopite (& Titanium Dioxide (& Stearyl Triethoxysilane	Sachet Sparkling White, SS treated	1.00
TOTAL		100

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



Satin Feel Foundation

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%
Water	Deionized Water	49.10
Magnesium Sulfate		0.20
Butylene Glycol		6.00
Benzoic Acid		0.20
Polydiethylsiloxane	SiBrid® DE-12	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
Laureth-7	Rhodasurf L-7/90 (Solvay)	0.50
Polydiethylsiloxane	SiBrid® DE-12	12.00
Titanium Dioxide (& Stearyl Triethoxysilane	WIA-SSA	8.00
Talc (& Stearyl Triethoxysilane	TA7-SSA	4.10
Iron Oxides (& Stearyl Triethoxysilane	YIA-SSA	1.20
Iron Oxides (& Stearyl Triethoxysilane	RIA-SSA	0.50
Iron Oxides (& Stearyl Triethoxysilane	BIA-SSA	0.20
TOTAL		100



Seribrite™ SS – A High Performance Lubricious Particle

INCI NAME: *Mica (&) Stearyl Triethoxysilane*

Seribrite™ SS is a high whiteness sericite that provides slip and creaminess not achievable with other treated and untreated sericites.

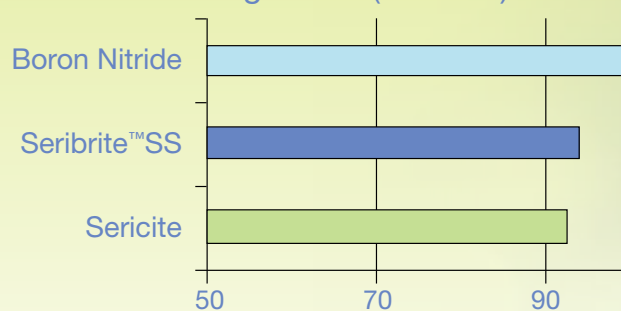
SERIBRITE™ KEY PERFORMANCE BENEFITS

- Cost effective alternative to boron nitride
- Reduced Tack and Greasiness
- Rich, lubricious after-feel
- High L* (lightness) value
- Improved Spreadability
- Soft & silky feel



FORMULATION

Lightness (L* Value)



RECOMMENDED APPLICATIONS

- Cream to powder/hot pours
- Liquid foundation
- Pressed powders
- Creams & Lotions
- Mineral Makeup
- Lipsticks

Powder Cream Concealer

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 properties. Seribrite™ SS is added as a Boron Nitride replacement due to its whiteness, slip, and creamy feel upon application.

INCI Name	Ingredient (Supplier)	Wt%
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
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 (&)	WIA-MLA	19.70
Dimethicone PEG-3 Laurate		
Iron Oxides (&)	YIA-MLA	2.50
Dimethicone PEG-3 Laurate		
Iron Oxides (&)	RIA-MLA	0.85
Dimethicone PEG-3 Laurate		
Iron Oxides (&)	BIA-MLA	0.15
Dimethicone PEG-3 Laurate		
Talc (&)	TA7-MLA	18.60
Dimethicone PEG-3 Laurate		
Mica (&)	Seribrite™ SAB-SSA	15.00
Stearyl Triethoxysilane		
TOTAL		100

Gelest HS – Hydrosperse

INCI NAME: Disodium Carboxyethyl Siliconate

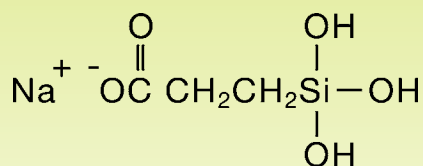
Gelest Hydrosperse surface modification creates an anionic, hydrophilic reacted coating that provides instant dispersion in aqueous media without high shear agitation.

HS KEY PERFORMANCE BENEFITS

- Improved wetting in aqueous systems
- Dispersion in water with low shear mixing
- Complete color development
- Higher tinting strength
- Capability to achieve high pigment loading
- Reduced tendency for color flotation and plate-out



FORMULATION



untreated yellow iron oxide in water *HS treated yellow iron oxide in water*

RECOMMENDED APPLICATIONS

- Liquid Eye Liners
- Mascaras
- Oil in Water Foundations
- Water based Concealers

Eyeliner with Hydrosperse (HS) Pigments

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

INCI Name	Ingredient (Supplier)	Wt%
Water	Deionized Water	69.49
Butylene Glycol		6.00
Preservative		0.30
Water	Deionized Water	4.00
Tromethamine	Tris Amino® (Dow)	1.00
Shellac	(Mantrose-Haeuser)	1.00
Hydroxyethylcellulose	Natrosol™250 MR (Hercules)	0.50
Iron Oxides (&) Disodium Carboxyethyl Siliconate	BIA-HSA	10.00
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		q.s.
Water	Deionized Water	q.s.
TOTAL		100

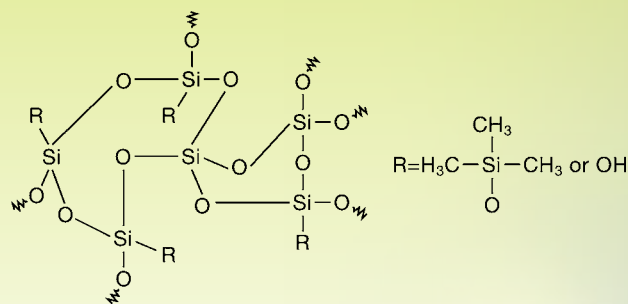
Gelest SR – Super Resistant

INCI NAME: *Trimethylsiloxysilicate*

SR pigments and fillers are coated with a hydroxyl terminated silsesquioxane network that improves adhesion to skin and hair. SR pigments are well suited for use in eye make-up formulations. They are hydrophobic, yet are not overly sensitive to oils including sebum.

SR KEY PERFORMANCE BENEFITS

- Water repellency
- Low oil absorption
- Forms high solids dispersions
- Improves wear
- Improves skin adhesion
- Improves compressibility
- Recommended for long wearing eye area products



RECOMMENDED APPLICATIONS

- Mascara
- Eyeliner
- Pressed Powder Eye Shadow
- Foundation
- Lip Products

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.

FORMULATION

Waterproof Mascara with SR Pigments

The SR treated pigment increases water resistance and adhesion to the lashes while reducing the tendency to smudge.

INCI Name	Ingredient (Supplier)	Wt%
Isododecane	Permethyl Fluid 99A (Presperse)	23.05
Polyethylene	AC Polyethylene 6A (Honeywell)	11.00
Euphorbia Cerifera Wax	Candelilla (Ross Wax)	4.50
Polyglyceryl-3 Diisostearate	Prisorine 3700 (Croda)	0.25
	Benzoic Acid	0.20
	Pentaerythrityl Rosinate (Ashland)	2.00
Isododecane	Permethyl Fluid 99A	2.00
Zinc Stearate	Zinc Stearate 921-G (Brenntag)	1.00
Silica Silylate	SIS6962.1M30	1.00
Isododecane	Permethyl Fluid 99A (Presperse)	8.00
Iron Oxides, Trimethylsiloxysilicate	BIA-SRA	12.00
Petroleum Distillates,	Bentone Gel SS-71 (Elementis)	35.00
Distearyldimonium Hectorite		
TOTAL		100



Gelest ML – Maximum Loading

INCI NAME: *Dimethicone PEG-3 Laurate*

ML surface treatments utilize a hydrophobic siloxane with an embedded polar segment that disrupts particle-particle interaction. The combination of alkyl and polyethylene glycol functional groups are balanced to maximize wetting in non-polar oils.

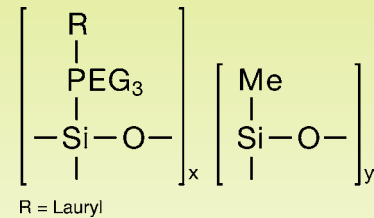
ML KEY PERFORMANCE BENEFITS

- High pigment loading
- Excellent pigment wetting in oils
- Low oil absorption
- Water repellency
- Low viscosity dispersions
- Improved compressibility
- Maximizes color intensity

RECOMMENDED APPLICATIONS

- Powdercream Formulations
- Pencils
- Cream Eye Shadows
- Stick Eye Shadows

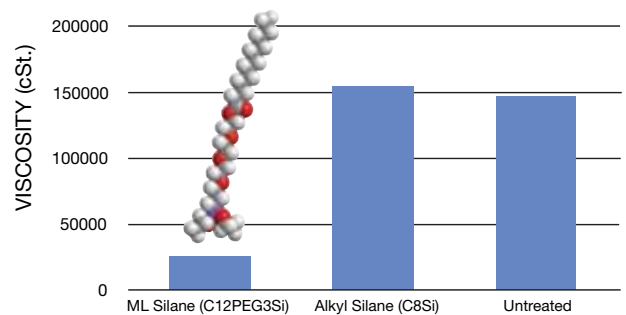
FORMULATION



untreated yellow
iron oxide in
ethylhexylpalmitate

ML treated yellow
iron oxide in
ethylhexylpalmitate

Dispersion viscosity of 65% red iron oxide in ethylhexylpalmitate



Powder Cream Concealer with ML Pigments

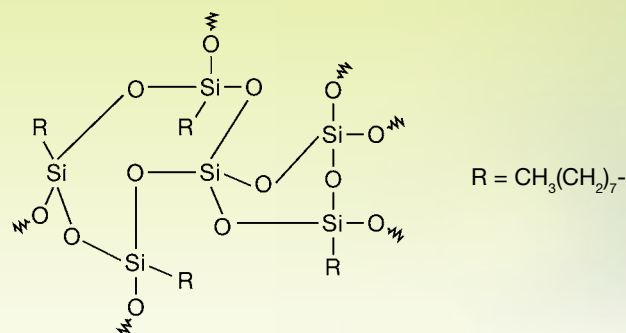
Compared to the same formulation prepared with alkyl silane treated pigments, a 10% higher pigment load is possible using ML treated pigments while maintaining a pourable melt. The high coverage formula applies as a cream yet has the dry feel of a powder.

INCI Name	Ingredient (Supplier)	Wt%
Ethylhexyl Palmitate	Ceraphyl 368 (Ashland)	12.04
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
	Ceraphyl 368	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	19.80
Iron Oxides, Dimethicone PEG-3 Laurate	YIA-MLA	2.50
Iron Oxides, Dimethicone PEG-3 Laurate	RIA-MLA	0.85
Iron Oxides, Dimethicone PEG-3 Laurate	BIA-MLA	0.18
Talc, Dimethicone PEG-3 Laurate	TA7-MLA	18.43
Mica, Dimethicone PEG-3 Laurate	SAA-MLA	15.00
TOTAL		100

Gelest AS - Polymeric C8 Silane

INCI NAME: *Polycaprylylsilsesquioxane*

AS treated pigments and fillers are coated with an alkyl functional silsesquioxane which provides a hydrophobic coating that increases the ease of particle dispersion in natural and synthetic fluids and helps to stabilize particles in emulsion systems. The AS treatment is polymer based to allow for registration as a polymeric material.



AS KEY PERFORMANCE BENEFITS

- Polymeric C8 (Caprylyl) treatment
- Globally approved
- Hydrophobic
- Improves wear on skin
- Decreases oil absorption

RECOMMENDED APPLICATIONS

- BB Creams
- Foundations
- Pressed Powders
- Hot Pours



FORMULATION

Soft Frost Eye Shadow

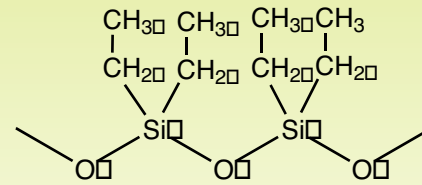
Polycaprylylsilsesquioxane (AS) treated pigments help to improve color development, transfer resistance, and wear time in color cosmetic formulations.

INCI Name	Ingredient (Supplier)	Wt%
Talc (&) Triethoxycaprylylsilane	TA7-ASA	53.30
Mica (&) Triethoxycaprylylsilane	SAA-ASA	10.00
Ultramarines (&) Triethoxycaprylylsilane	LIA-ASA	4.00
Iron Oxides (&) Triethoxycaprylylsilane	YIA-ASA	3.00
Iron Oxides (&) Triethoxycaprylylsilane	BIA-ASA	2.00
Zinc Stearate	Zinc Stearate 921-G (Brenntag)	3.00
Nylon-12	Orgasol® 2002D Nat Cos (Vantage Specialty)	3.00
	Benzoic Acid	0.20
Alumina (&) Titanium Dioxide (&) Stearyltriethoxysilane	Spectraflex® Gold (Sun Chemical), SS treated	20.00
Polydiethylsiloxane	SiBrid® DE-23	0.50
Octyldodecyl Stearate	Ceraphyl® ODS (Ashland)	1.00
TOTAL		100

Gelest DE - DiEthicone

INCI NAME: Polydiethylsiloxane

DE treated pigments and fillers offer faster dispersion, improved spread, and improved color development when compared to methicone treatments. This globally approved surface treatment decreases oil absorption allowing for ease of dispersion.



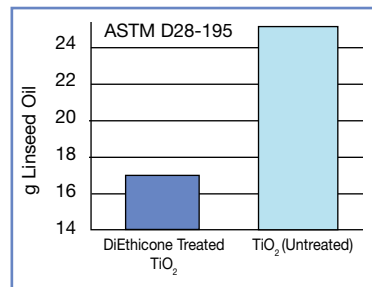
DE KEY PERFORMANCE BENEFITS

- Improves dispersion
- Rich, lubricious feel
- Improves spreadability
- Improves Hegman readings
- Improves color development
- Globally approved surface treatment

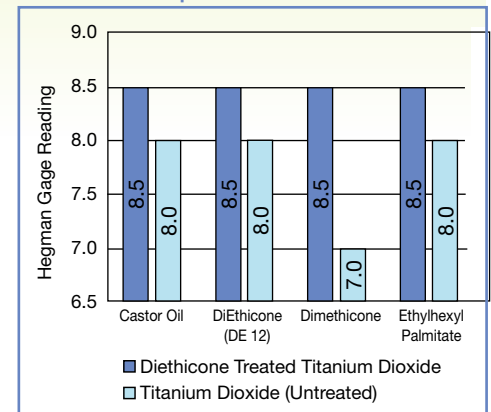
RECOMMENDED APPLICATIONS

- Lipsticks
- BB Creams
- Pressed Powders
- Liquid Foundations
- Cream to Powder/Hot Pours

Oil Absorption



Ease of Dispersion



FORMULATION

Hot Pour Eyeshadow

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

Gelest TC - C8 Pigments

INCI NAME: *Triethoxycaprylylsilane*

TC treated pigments and fillers are coated with an alkyl silane which provides a very hydrophobic coating that increases the ease of particle dispersion in natural and synthetic fluids and helps to stabilize particles in emulsion systems.

TC KEY PERFORMANCE BENEFITS

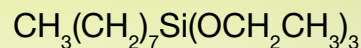
- Improves pigment performance in oils and silicone
- Economical hydrophobic pigment treatment
- Decreases oil absorption
- Improves wear on skin

FORMULATION

Conditioning Lipstick

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.

INCI name	Ingredient (Supplier)	Wt%
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	2.50
Methylparaben		0.20
Propylparaben		0.10
Ricinus Communis (Castor) Seed Oil	Crystal O® (Vertellus)	10.00
Iron Oxides (&)	RIA-TCA	6.50
Triethoxycaprylylsilane		
Titanium Dioxide (&)	WIA-TCA	2.50
Triethoxycaprylylsilane		
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
Mica & Titanium Dioxide (&) Silica	Timiron® Splendid Red (EMD),	8.00
(&) Stearyl Triethoxysilane	SS Treated	
TOTAL		100



RECOMMENDED APPLICATIONS

- BB Creams
- Foundations
- Pressed Powders
- Hot Pours

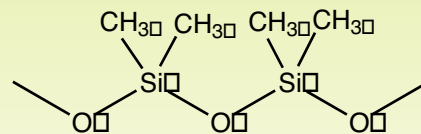


Gelest DM - Dimethicone Pigments

INCI NAME: *Dimethicone*

DM KEY PERFORMANCE BENEFITS

- Hydrophobic pigment treatment
- Improves slip
- Improves wetting
- Improves overall pigment performance in oils and silicone



RECOMMENDED APPLICATIONS

- BB Creams
- Foundations
- Pressed Powders
- Hot Pours



FORMULATION

Shimmer to Pearl Eye Shadow

Pigmented powdered products, such as eyeshadows, benefit from the use of dimethicone (DM) treated pigments. These treated pigments offer good hydrophobic properties that improve wear, improve powder flow, help to produce smoother powders, and increase color development.

INCI name	Ingredient (Supplier)	Wt%
Talc (& Dimethicone	TA7-DMA	q.s.
Irons Oxides (& Dimethicone	RIA-DMA	3.00
Irons Oxides (& Dimethicone	YIA-DMA	4.00
Irons Oxides (& Dimethicone	BIA-DMA	3.00
Zinc Stearate	Zinc Stearate 921-G (Brenntag)	5.00
Nylon-12	Orgasol® 2002D (Lipo)	8.00
Preservative		q.s.
Iron Oxides (&) Mica (& Titanium Dioxide*	Pearl	q.s.
Polydiethylsiloxane	SiBrid® DE-23	3.00
Ethylhexyl Palmitate	Ceraphyl 368	3.00
TOTAL		100

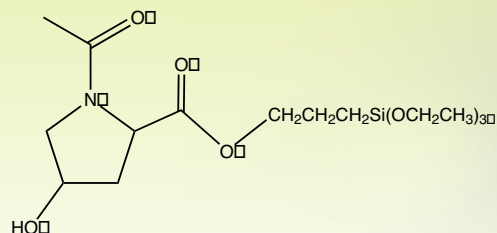
Developmental Products

Gelest is in continuous development of advanced surface modification chemistry, including amino-acid silanes. Contact us for more information.

Gelest Skin Friendly (SF) Treatment

INCI name: *Triethoxysilylpropyl Acetyl Hydroxyprolinate*

- Hydrophilic amino acid treatment
- Improves affinity for the skin
- Increases moisture binding capability
- Firms skin
- Smooth skin feel
- Improves color development
- Mass tone/Skin tone agreement
- Improves powder pressing



FORMULATION

Velvety Concealer

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%
Water	Deionized Water	q.s.
Polysorbate 60	Tween™ 60 (Croda)	0.10
Magnesium Aluminum Silicate	Veegum® (Vanderbilt®)	0.70
Sodium Lithium Magnesium Silicate	Laponite® XLG (Eckart)	0.30
Titanium Dioxide (&) Triethoxysilylpropyl Acetyl Hydroxyprolinate	WIA-SFA	16.00
Iron Oxides (&) Triethoxysilylpropyl Acetyl Hydroxyprolinate	YIA-SFA	1.60
Iron Oxides (&) Triethoxysilylpropyl Acetyl Hydroxyprolinate	RIA-SFA	0.60
Iron Oxides (&) Triethoxysilylpropyl Acetyl Hydroxyprolinate	BIA-SFA	0.16
Talc (&) Triethoxysilylpropyl Acetyl Hydroxyprolinate	TA7-SFA	1.64
Butylene Glycol		6.00
Cellulose Gum	Aqualon® CMC7H3SF (Ashland)	0.10
Polysorbate 60	Tween™ 60 (Croda)	0.40
Preservative		q.s.
Potassium Cetyl Phosphate	Amphisol® K (DSM)	2.00
Polydiethylsiloxane	SiBrid® DE-12	12.00
Ethylhexyl Palmitate	Ceraphy® 368 (Ashland)	5.00
Glyceryl Stearate	Cerasynt® SD (Ashland)	1.50
Sorbitan Stearate	Span™ 60 (Croda)	1.0
Preservative		q.s.
Propyl Trisiloxane	TM-031	4.00
TOTAL		100



One Pot Hot Pour Makeup for Eyes & Cheeks

INCI Name	Ingredient (Supplier)	Wt%
PHASE A		
Polydiethylsiloxane	SiBrid® DE-12	q.s.
Stearyl Methicone	SiBrid® TM-181	4.30
Octyldodecanol	Octyldodecanol	3.00
Ethylhexyl Palmitate	Ethylhexyl Palmitate	3.00
Copernica Cerifera (Carnauba) Wax	Carnauba Wax 63 (Strahl & Pitsch)	6.25
Ozokerite	Ozokerite 180 (Koster Kuenen)	2.75
PHASE B		
Monotriacontyl terminated Polydimethylsiloxane	Developmental	6.00
Isododecane & Disteardimonium Hectorite & Propylene Carbonate	Bentone Gel ISDV	7.25
PHASE C		
Titanium Dioxide & Polydiethylsiloxane	WIA-DEA	3.10
Iron Oxides & Polydiethylsiloxane	YIA-DEA	0.50
Iron Oxides & Polydiethylsiloxane	RIA-DEA	1.40
Iron Oxides & Polydiethylsiloxane	GIA-DEA	4.50
Talc & Polydiethylsiloxane	TA7-DEA	1.00
Polydiethylsiloxane	SiBrid® DE-12	q.s.
PHASE D		
Mica & Stearyl Triethoxysilane	Seribrite® SS	15.00
PHASE E		
Isododecane	Isododecane	13.00
Cyclopentasiloxane	Cyclopentasiloxane	5.00
PHASE F		
	GlassMira® Pearls (Sandream Ent.)	10.00
PHASE G		
	Preservatives (Schülke)	q.s.
TOTAL		100

Developmental Products

The following are examples of reactive silane and siloxane treatments that are INCI listed.

Perfluorooctylethyltriethoxysilane (FS series)

Heptadecafluorodecyltriethoxysilane (chemical name)

- Lipophobic and hydrophobic
- Resistant to acidic and alkali conditions

Methoxy PEG-10 Propyltrimethoxysilane (PG series)

Methoxypolyethyleneoxypropyltrimethoxysilane (chemical name)

- Hydrophilic
- Reduces viscosity of aqueous dispersions

Silanetriol (MS series)

Trihydroxymethylsilane (chemical name)

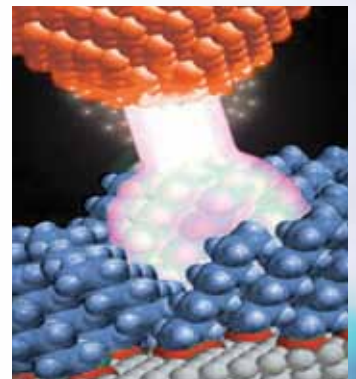
- Moderately lipophobic and hydrophobic
- Improved suspension



Surface Modification Services

Our custom surface modification services allow users to select custom and proprietary treatments applied by a variety of deposition technologies on a wide range of fillers and pigments. Our technical representatives are pleased to discuss the options available.

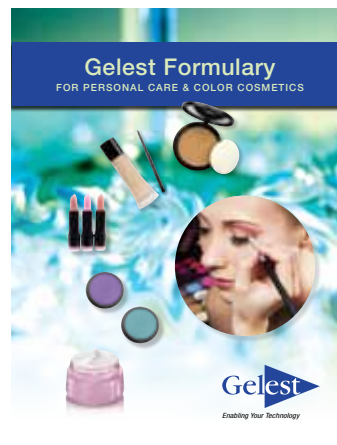
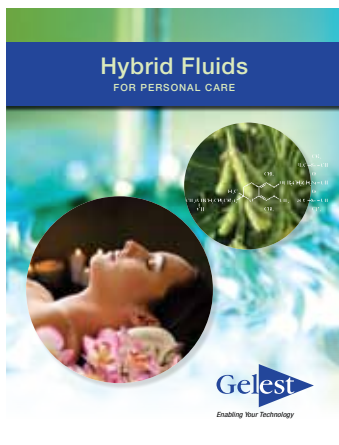
Gelest also applies a variety of other standard surface modifications to pigments and fillers.



*From
Laboratory
to
Commercial
Scale*



**FOR ADDITIONAL
PRODUCT
INFORMATION
ON GELEST'S
PCS TECHNOLOGY:
WWW.GELEST.COM**



ADDITIONAL GELEST LITERATURE



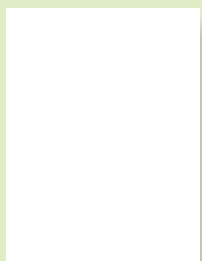
HYDROPHOBICITY, HYDROPHILICITY AND SILANE SURFACE MODIFICATION

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.



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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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