

Surface Treatment Map

Treatment Code	INCI	Properties	Formula Applications	Dispersion Availability
Lipophilic Treatment				
ITT	<i>Isopropyl Titanium Triisostearate</i>	<ul style="list-style-type: none"> Highly Lipophilic Allows high pigment loading in esters, mineral oils or hydrocarbons; good for cream-to-powder formulations Improves compressibility in pressed powders and reduces breakage Excellent affinity to the skin Creamy skin feel US Patent #4,877,604 	KBL-015A KCP-018 KHP-009A KLF-223 KLF-235A-BR KLG-082 KLP-136C KLP-153 KLP-162 KLP-170 KLP-179A KPP-099A KPP-105-BR KPP-109-EU Recommended Applications: Emulsions, Hot Pours, Powders	(CO) <i>Ricinus Communis (Castor) Seed Oil</i> (IN) <i>Isononyl Isononanoate</i> (PMLVP) <i>Isododecane</i> (PT1BM) <i>Phenyl Trimethicone</i> (SW) <i>Synthetic Wax</i> (WE) <i>Polyglyceryl-4 Isostearate, Cetyl PEG/PPG-10/1 Dimethicone, Hexyl Laurate</i>
Silicone Treatment				
11S	<i>Triethoxycaprylylsilane</i>	<ul style="list-style-type: none"> Hydrophobic; Lipophilic Compatible with esters, oils & silicones Stable at pH of 3 No hydrogen potential Nice spreadability, creamy, wet feeling 	KBL-021A KBL-024 KEY-048E-BR KLF-119A KLF-188A KLF-233-BR KLP-116 KLP-175 KLP-177 KPP-062B-BR KPP-064G KPP-072A KPP-094A-BR Recommended Applications: Emulsions, Hot Pours, Powders	(FAS) <i>Cyclopentasiloxane, PEG/PPG-18/18 Dimethicone;</i> (FAND) <i>Dimethicone, PEG/PPG-18/18 Dimethicone;</i> (TN) <i>C12-15 Alkyl Benzoate</i>
DS	<i>Dimethicone</i>	<ul style="list-style-type: none"> Hydrophobic Good slip and lubricity over methicone treatment Good for wet/dry powders and W/Si emulsions 	Recommended Applications: W/Si Emulsions, Powders	-
MS	<i>Methicone</i>	<ul style="list-style-type: none"> Very Hydrophobic Stable at pH 3-9 Good for wet/dry powder and W/Si Emulsions Not very compatible with esters, oil and water based emulsions 	KEY-015A Recommended Applications: W/Si Emulsions, Hot Pours, Powders	-
Hybrid Treatment				
11SP	<i>Triethoxycaprylylsilane (and) Polyhydroxystearic Acid</i>	<ul style="list-style-type: none"> Hydrophobic; Lipophilic Disperses easily into oil phase and develops full color fast Silky skin feel Pressed powders can be made using silicone as the sole liquid binder Patent US #9254398; China #ZL 201080013615.8 	KCC-014A-BR KLF-158A KLF-173A KPP-031A Recommended Applications: Emulsions, Hot Pours, Powders	-
TTB	<i>Isopropyl Titanium Triisostearate (And) Triethoxysilylethyl Polydimethylsiloxyethyl Dimethicone</i>	<ul style="list-style-type: none"> Hydrophobic; Lipophilic "Super dispersible" in all media Stable over a range of pH Good skin affinity to skin, resulting in long wear Patent Pending #WO/2005/099651 	KEL-015 KLF-220-BR KLF-224 KLP-101A KLP-172 KMU-008 KPP-067A KPP-102A KPW-003F Recommended Applications: Emulsions, Hot Pours, Powders	(CM) <i>Cyclopentasiloxane</i> (FAS) <i>Cyclopentasiloxane, PEG/PPG-18/18 Dimethicone</i> (FADM) <i>Dimethicone, PEG/PPG-18/18 Dimethicone</i>

Fluorinated Treatment

FS

*Perfluorooctyl
Triethoxysilane*

- Hydrophobic; Lipophobic
- Pigments display long wear and stay true color
- Excellent spreadability
- Suitable for wet/dry formulas and dry water formulas
- Environmentally friendly; No Perfluorooctanoic Acid (PFOA)
- Licensee of Avon US Patent #6,315,990

KEY-046A-BR KMA-065B
KEY-094 KPP-061D
KLF-122E-BR KPP-075B
KLP-167 KPP-108-EU
KLP-168 KPW-015G
KLP-171

Recommended Applications:
Emulsions, Hot Pours, Powders

(DID) Diisopropyl Dimer
Dilinoleate
(FAS) Cyclopentasiloxane,
PEG/PPG-18/18 Dimethicone

Natural Treatment

ASG

*Stearoyl Glutamic
Acid*

- Hydrophobic
- Natural origin; Ecocert approved
- Aluminum free
- Imparts a creamy feel particularly in powders
- Offers good skin adhesion of pigment to the skin
- Pigments disperse easily into recommended application

KBL-018A KLP-145
KEY-039E KMU-010
KLF-236A KMU-018D
KLF-241 KPP-028
KLF-201A-BR KPP-063E
KLP-122B KPP-104A

Recommended Applications:
Emulsions, Hot Pours, Powders,
Anhydrous Gels

(DO) Diisostearyl Malate,
Octyldodecanol
(GCB) Caprylic/Capric Triglyceride
(GCG) Caprylic/Capric Triglyceride

CL

Lecithin

- Hydrophobic; Lipophilic
- Natural
- Exceptional smooth and silky skin feel particularly in pressed powders
- Heat sensitive

KPP-018

Recommended Applications:
Powders

MM

Magnesium Myristate

- Hydrophobic; Lipophilic
- Natural origin; Vegetable derived
- Highly creamy feel and low odor
- Good adhesion to the skin
- Improved wear
- Excellent pressability

KEY-029A KEY-035A

Recommended Applications:
Hot Pours, Powders

NJE

Jojoba Esters

- Hydrophobic; Lipophilic
- Natural origin; Ecocert Approved
- Odorless; Excellent heat stability
- Creamy feel
- Good skin affinity
- Good pressability in powders
- US Patent #8,623,386 B2

KLP-125 KPP-056A
KPP-020E KPP-103A
KPW-007H

Recommended Applications:
Emulsions, Hot Pours, Powders

(OD) Octyldodecanol
(JOH) Simmondsia Chinensis
(Jojoba) Seed Oil

PC

Hydrogenated Lecithin

- Hydrophobic yet moisturizing
- Natural origin
- Highly creamy feel and good affinity to the skin

KPP-041B

Recommended Applications:
Hot Pours, Powders

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