

Treatment Code	INCI	Properties	Formula Applications	Dispersion Availability
<b>Fluorinated Treatment</b>				
<b>FS</b>	Perfluorooctyl Triethoxysilane	<ul style="list-style-type: none"> <li>Hydrophobic; Lipophobic</li> <li>Pigments display long wear and stay true color</li> <li>Excellent spreadability</li> <li>Suitable for wet/dry formulas and dry water formulas</li> <li>Environmentally friendly; No Perfluorooctanoic Acid (PFOA)</li> <li>Licensee of Avon US Patent #6,315,990</li> </ul>	KEY-046A-BR KPP-061D KLF-122E-BR KPP-068B KMA-065B KPP-075B KPW-015G <b>Recommended Applications:</b> Emulsions Hot Pours Powders	(DID) Diisopropyl Dimer Dinoleate; (FAS) Cyclopentasiloxane, PEG/PPG-18/18 Dimethicone
<b>FHS*</b>	Perfluorooctyl Triethoxysilane	<ul style="list-style-type: none"> <li>Hydrophobic; Lipophobic</li> <li>No PFOA</li> <li>FHS-A Mica and Talc contain Aluminum Chloride (in INCI)</li> <li>AlCl3 meets USP grade</li> </ul>	KLF-134 <b>Recommended Applications:</b> Emulsions Hot Pours Powders	No
<b>Hybrid Treatment</b>				
<b>11SP</b>	Triethoxycaprylylsilane (and) Polyhydroxystearic Acid	<ul style="list-style-type: none"> <li>Hydrophobic; Lipophilic</li> <li>Disperses easily into oil phase and develops full color fast</li> <li>Silky skin feel</li> <li>Pressed powders can be made using silicone as the sole liquid binder</li> <li>Patent US #9254398</li> </ul>	KCC-014A-BR KLF-153B-BR KLF-066A KLF-158A KPP-031A <b>Recommended Applications:</b> Emulsions Hot Pours Powders	No
<b>TTB</b>	Isopropyl Titanium Triisostearate (And) Triethoxysilylethyl Polydimethylsiloxyethyl Dimethicone	<ul style="list-style-type: none"> <li>Hydrophobic; Lipophilic</li> <li>"Super dispersible" in all media</li> <li>Stable over a range of pH</li> <li>Good skin affinity to skin, resulting in long wear</li> <li>Patent Pending #WO/2005/099651</li> </ul>	KEL-015 KLF-224 KPP-067A KLF-105A KLP-101A KPP-102A KLF-220-BR KMU-008 KPW-003F <b>Recommended Applications:</b> Emulsions Hot Pours Powders	(FAS) Cyclopentasiloxane, PEG/PPG-18/18 Dimethicone (FADM) Dimethicone, PEG/PPG-18/18 Dimethicone
<b>DS-PDL3*</b>	Dimethicone (And) Cetearyl Alcohol (And) Stearic Acid (And) Ceramide (And) Phytosterols	<ul style="list-style-type: none"> <li>Hydrophobic; Lipophilic</li> <li>PDL3 mimics stratum corneum intercellular lipid</li> <li>Excellent skin protection effect (barrier function to maintain moisture)</li> <li>Excellent skin compatibility and adhesion</li> </ul>	KLP-142 KPP-078B <b>Recommended Applications:</b> Emulsions Hot Pours Powders	No
<b>Lipophilic Treatment</b>				
<b>ITT</b>	Isopropyl Titanium Triisostearate	<ul style="list-style-type: none"> <li>Highly Lipophilic</li> <li>Allows high pigment loading in esters, mineral oils or hydrocarbons; good for cream-to-powder formulations</li> <li>Improves compressibility in pressed powders and reduces breakage</li> <li>Excellent affinity to the skin</li> <li>Creamy skin feel</li> <li>US Patent #4,877,604</li> </ul>	KBL-015A KLP-098 KCP-018 KLP-109C KHP-009A KLP-136C KLF-044B-CH KLP-148A KLF-157-EU KLP-153 KLG-082 KPP-013H KLP-055A KPP-099A <b>Recommended Applications:</b> Emulsions Hot Pours Powders	(CO) Ricinus Communis (Castor) Seed Oil; (IN) Isononyl Isononanoate; (PMLVP) Isododecane; (PT1BM) Phenyl Trimethicone; (SW) Synthetic Wax; (WE) Polyglyceryl-4 Isostearate, Cetyl PEG/PPG-10/1 Dimethicone, Hexyl Laurate
<b>ASI*</b>	Isopropyl Titanium Triisostearate (And) Sodium Lauroyl Aspartate (And) Zinc Chloride	<ul style="list-style-type: none"> <li>Hydrophobic; Lipophilic</li> <li>By combining ITT with Amino Acid Treatment, pigments are rendered lipophilic, making them easily dispersible in oils</li> <li>Creamy texture</li> <li>Moisturizing feel</li> <li>Uniform spreading</li> </ul>	KPP-033 <b>Recommended Applications:</b> Emulsions Hot Pours Powders Gels	No

## Natural Treatment

<b>ASG</b>	Stearoyl Glutamic Acid	<ul style="list-style-type: none"> <li>Hydrophobic</li> <li>Natural origin; Ecocert approved</li> <li>Aluminum free</li> <li>Imparts a creamy feel particularly in powders</li> <li>Offers good skin adhesion of pigment to the skin</li> <li>Pigments disperse easily into recommended application</li> </ul>	KBL-018A KCP-038 KEY-039E KLF-145A-BR	KLF-167 KLP-122B KLP-145 KMU-010	KMU-018D KPP-063E KPP-074A KPP-104A	(GCB) Caprylic/Capric Triglycerides (GCG) Caprylic/Capric Triglyceride, Polyglyceryl-3 Diisostearate
<b>CL</b>	Lecithin	<ul style="list-style-type: none"> <li>Hydrophobic; Lipophilic</li> <li>Natural</li> <li>Exceptional smooth and silky skin feel particularly in pressed powders</li> <li>Heat sensitive</li> </ul>		KPP-018		No
<b>MM</b>	Magnesium Myristate	<ul style="list-style-type: none"> <li>Hydrophobic; Lipophilic</li> <li>Natural origin; Vegetable derived</li> <li>Highly creamy feel and low odor</li> <li>Good adhesion to the skin</li> <li>Improved wear</li> <li>Excellent pressability</li> </ul>		KEY-029A KEY-035A KPP-047		No
<b>NJE</b>	Jajoba Esters	<ul style="list-style-type: none"> <li>Hydrophobic; Lipophilic</li> <li>Natural origin; Ecocert Approved</li> <li>Odorless; Excellent heat stability</li> <li>Creamy feel</li> <li>Good skin affinity</li> <li>Good pressability in powders</li> <li>US Patent #8,623,386 B2</li> </ul>	KLP-060 KLP-125	KPP-020E KPP-056A KPP-103A		(OD) Octyldodecanol
<b>PC</b>	Hydrogenated Lecithin	<ul style="list-style-type: none"> <li>Hydrophobic yet moisturizing</li> <li>Natural origin</li> <li>Highly creamy feel and good affinity to the skin</li> </ul>		KPP-041B		No
<b>ASL*</b>	Sodium Lauroyl Glutamate (And) Lysine (And) Magnesium Chloride	<ul style="list-style-type: none"> <li>Hydrophobic</li> <li>Gemini Type Amphiphilic Amino Acid Treatment</li> <li>Adds water proofness</li> <li>Moisturizing Effect</li> <li>Good Feel</li> <li>Natural, Ecocert approved</li> </ul>			Recommended Applications: Emulsions Pressed Powders	No
<b>SIH*</b>	Silica	<ul style="list-style-type: none"> <li>Hydrophilic; Good dispersibility in water</li> <li>Less sedimentation in water</li> <li>Iron Oxides and TiO<sub>2</sub> are Ecocert approved</li> <li>Less surface activity</li> <li>Brighter color</li> <li>ZnO meets USP, pps 10-30 nm</li> </ul>			Recommended Applications: Emulsions Hot Pours Powders Gels	No

## Silicone Treatment

<b>11S</b>	Triethoxycaprylylsilane	<ul style="list-style-type: none"> <li>Hydrophobic; Lipophilic</li> <li>Compatible with esters, oils &amp; silicones</li> <li>Stable at pH of 3</li> <li>No hydrogen potential</li> <li>Nice spreadability, creamy, wet feeling</li> </ul>	KBL-021A KEY-003A KEY-015A KEY-048E-BR KLF-079	KLF-086 KLF-119A KPP-049B KPP-064G KPP-094A-BR	(FAND) Dimethicone, PEG/PPG-18/18 Dimethicone; (FAS) Cyclopentasiloxane, PEG/PPG-18/18 Dimethicone; (TN) C12-15 Alkyl Benzoate	
<b>DS</b>	Dimethicone	<ul style="list-style-type: none"> <li>Hydrophobic</li> <li>Good slip and lubricity over methicone treatment</li> <li>Good for wet/dry powders and W/Si emulsions</li> </ul>			Recommended Applications: W/Si Emulsions Powders	No
<b>MS</b>	Methicone	<ul style="list-style-type: none"> <li>Very Hydrophobic</li> <li>Stable at pH 3-9</li> <li>Good for wet/dry powder and W/Si Emulsions</li> <li>Not very compatible with esters, oil and water based emulsions</li> </ul>		KEY-015A	Recommended Applications: W/Si Emulsions Hot Pours Powders	No

\* Distributed Product

Technical Literature ref SurfTreatUSACan004 - November 10, 2017