Triethoxycaprylylsilane is a very reactive surface-treating agent, because the hydrolysis of Si-O bond takes place readily in presence of moisture to form silanol.

The caprylysilyl group is then chemically bonded to the pigment via a condensation reaction between the silanol group formed above and the hydroxyl groups of the pigment surface. This reaction is thus especially suitable for treatment of metal oxides. At the completion of the reaction, all ethoxy groups are substituted and caprylysilyl groups are crosslinked to the pigments to form a very stable coating, even at low pH.

Silicone treated pigments disperse well in cyclomethicones. They have a very low surface tension and excellent hydrophobicity, but they sometimes have poor wettability in common organic vehicles.

While they offer maximum water repellency, triethoxycaprylylsilane treated pigments, because of the lipophilic capryl groups, are easy to disperse in esters, hydrocarbons and silicone fluids: higher pigment loading can be achieved as compared to methicone treated pigments.

The treatment is also physicochemically stable, even at pH 3, has no residual methanol, and, due to the absence of Si-H bonds, has zero hydrogen potential.

<table>
<thead>
<tr>
<th>Trade Name</th>
<th>INCI Name</th>
<th>Product type</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRO-11S2</td>
<td>Iron Oxides (CI 77491) (And) Triethoxycaprylylsilane</td>
<td>Red Iron Oxide</td>
</tr>
<tr>
<td>BYO-11S2</td>
<td>Iron Oxides (CI 77492) (And) Triethoxycaprylylsilane</td>
<td>Yellow Iron Oxide</td>
</tr>
<tr>
<td>BBO-11S2</td>
<td>Iron Oxides (CI 77499) (And) Triethoxycaprylylsilane</td>
<td>Black Iron Oxide</td>
</tr>
<tr>
<td>BLACK NF-11S2</td>
<td>Chromium Oxide Greens (And) Triethoxycaprylylsilane</td>
<td>Green Chromium</td>
</tr>
<tr>
<td>BGCO-11S3</td>
<td>Chromium Hydroxide Greens (And) Triethoxycaprylylsilane</td>
<td>Green Chromium Hydroxide</td>
</tr>
<tr>
<td>BHG TM-11S2</td>
<td>Ferric Ammonium Ferrocyanide (And) Triethoxycaprylylsilane</td>
<td>Blue Ferric Amm. Ferrocyanide</td>
</tr>
<tr>
<td>BFF-11S2</td>
<td>Ultramarines (And) Triethoxycaprylylsilane</td>
<td>Ultramarine Blue</td>
</tr>
<tr>
<td>BEUB-11S2</td>
<td>Ultramarines (And) Triethoxycaprylylsilane</td>
<td>Ultramarine Pink</td>
</tr>
<tr>
<td>BUP-11S2</td>
<td>Ultramarine Violet</td>
<td></td>
</tr>
<tr>
<td>BUV CG-11S2</td>
<td>Titanium Dioxide (And) Triethoxycaprylylsilane</td>
<td>Pigmentary TiO₂</td>
</tr>
</tbody>
</table>
KPP-064G

Pressed Powder with CARESS® BN12

Part 1

- SERICITE GMS-4C - Kobo Products: Mica 70.48%
- BTD-11S2 - Kobo Products: Titanium Dioxide (And) Triethoxycaprylylsilane 7.00%
- MST-203 - Kobo Products: Polymethylsilsequioxane 5.00%
- CARESS® BN12 - Bent Tree/Kobo Products: Zinc Myristate 2.00%
- BYO-11S2 - Kobo Products: Iron Oxides (CI 77492) (And) Triethoxycaprylylsilane 1.00%
- BRO-11S2 - Kobo Products: Iron Oxides (CI 77491) (And) Triethoxycaprylylsilane 0.86%
- BBO-11S2 - Kobo Products: Iron Oxides (CI 77499) (And) Triethoxycaprylylsilane 0.46%
- Propyl Paraben NF - International Sourcing: Propylparaben 0.10%
- Methyl Paraben NF - International Sourcing: Methylparaben 0.10%

Manufacturing Procedure

1. Micropulverize Part 1 until color is fully developed.
3. Blend well.
4. Press at 500 psi.

Description

This powder features Kobo’s CARESS® BN12, Boron Nitride, for superior softness and tactility, superb spreadability, excellent adherence, long lasting effect, and good coverage. SERICITE GMS-4C gives a glide-on application. The Silane-Treated Pigments disperse easily, adhere to the skin, and resist darkening during wear. MST-203 gives slip and a great creamy feel. ZINC MYRISTATE also contributes to great feel and adherence on the skin.

Part 2

- Lexol® PG-865 - Inolex Chemical Company: Propylene Glycol Dicaprylate/Dicaprate 2.50%
- ELEMENT14 PDMS 20 - Momentive: Dimethicone 2.50%
- ELEMENT14 PDMS 350 - Momentive: Dimethicone 2.00%
- SS4267 - Momentive: Dimethicone (And) Trimethylsiloxy silicate 1.00%

Silane Treatment

www.koboproducts.com