Silane Treatment

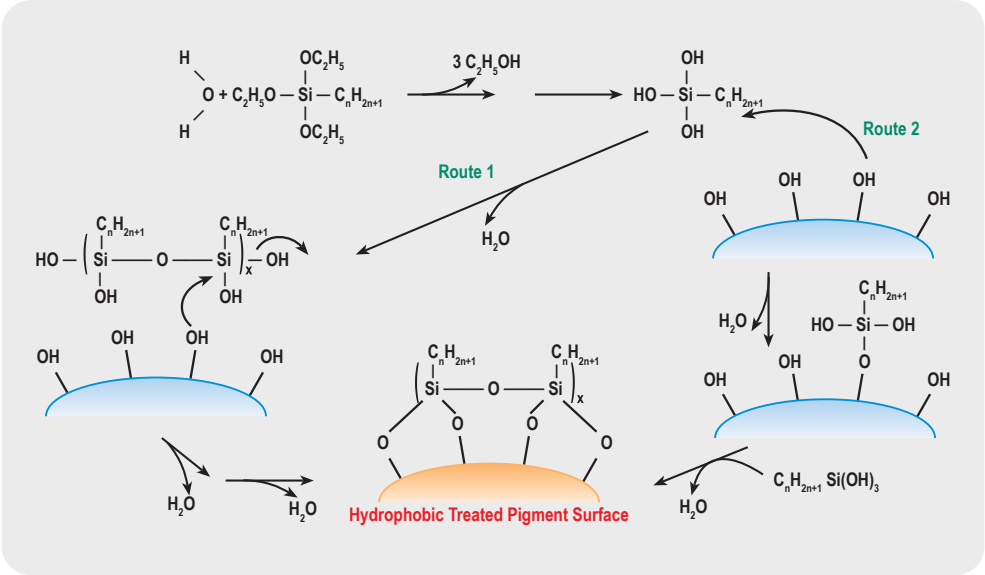
INCI Name: Triethoxycaprylylsilane

Code: Treatment 11S

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 caprylylsilyl 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 treament of metal oxides. At the completion of the reaction, all ethoxy groups are substituted and caprylylsilyl 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 caprylyl groups, are easy to disperse in esters, mineral oils 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.

Trade Name	INCI Name	Product type
BRO-11S2	*Iron Oxides (CI 77491) (And) Triethoxycaprylylsilane*	Red Iron Oxide
BYO-11S2	*Iron Oxides (CI 77492) (And) Triethoxycaprylylsilane*	Yellow Iron Oxide
BBO-11S2	*Iron Oxides (CI 77499) (And) Triethoxycaprylylsilane*	Black Iron Oxide
BLACK NF-11S2		
BGCO-11S3	*Chromium Oxide Greens (And) Triethoxycaprylylsilane*	Green Chromium Oxide
BHG TM-11S2	*Chromium Hydroxide Greens (And) Triethoxycaprylylsilane*	Green Chromium Hydroxide
BFF-11S2	*Ferric Ammonium Ferrocyanide (And) Triethoxycaprylylsilane*	Blue Ferric Amm. Ferrocyanide
BEUB-11S2	*Ultramarines (And) Triethoxycaprylylsilane*	Ultramarine Blue
BUV CG-11S2		Ultramarine Violet
BTD-11S2	*Titanium Dioxide (And) Triethoxycaprylylsilane*	Pigmentary Titanium Dioxide
RBTD-671-11S2		

KOBO

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Trade Name	INCI Name	Product type
BLUE 1AL-11S4	*Blue 1 Lake (And) Triethoxycaprylylsilane*	FD&C Blue No. 1 Aluminum Lake
RED 6SS-11S2	*Red 6 (And) Triethoxycaprylylsilane*	D&C Red No. 6
RED 6BA C-11S5	*Red 6 Lake (And) Triethoxycaprylylsilane*	D&C Red No. 6 Barium Lake
RED 7CA C-11S5	*Red 7 Lake (And) Triethoxycaprylylsilane*	D&C Red No. 7 Calcium Lake
RED 27AL-11S3	*Red 27 Lake (And) Triethoxycaprylylsilane*	D&C Red No. 27 Aluminum Lake
RED 28AL C-11S3	*Red 28 Lake (CI 45410) (And) Triethoxycaprylylsilane*	D&C Red No. 28 Aluminum Lake
RED 33AL-11S2	*Red 33 Lake (And) Triethoxycaprylylsilane*	D&C Red No. 33 Aluminum Lake
YELLOW 5AL-11S2	*Yellow 5 Lake (And) Triethoxycaprylylsilane*	FD&C Yellow No. 5 Aluminum Lake
YELLOW 6AL-11S2	*Yellow 6 Lake (And) Triethoxycaprylylsilane*	FD&C Yellow No. 6 Aluminum Lake
MT-600B-11S5	*Titanium Dioxide (And) Triethoxycaprylylsilane*	Attenuation Grade Titanium Dioxide
New ZNO XZ-11S3L	*Zinc Oxide (And) Triethoxycaprylylsilane*	Attenuation Grade Zinc Oxide
New ZnO-660SS-11S5		
MZO-35-11S5		
ZNO FSF-11S4		
A120-ZNO-11S3		
New TiO2-IR300-11S2	*Titanium Dioxide (And) Triethoxycaprylylsilane*	IR Blocker
New A1K-TiO2-11S2	*Titanium Dioxide (And) Aluminum Hydroxide (And) Triethoxycaprylylsilane*	
ASO-11S2	*Aluminum Starch Octenylsuccinate (And) Triethoxycaprylylsilane*	Aluminum Starch Octenylsuccinate
GMS-11S2	*Mica (And) Triethoxycaprylylsilane*	Sericite
MICA S-11S4		Mica
New KoboMica 1000S-11S2	*Synthetic Fluorphlogopite (And) Triethoxycaprylylsilane*	Synthetic Fluorphlogopite
TALC U-11S2	*Talc (And) Triethoxycaprylylsilane*	Talc

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: *Polymethylsilsesquioxane* 5.00%
- **CARESS® BN12** - Bent Tree/Kobo Products: *Boron Nitride* 5.00%
- **ZINC MYRISTATE** - 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%

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) Trimethylsiloxysilicate* 1.00%

Manufacturing Procedure

1. Micropulverize Part 1 until color is fully developed.
2. Add Part 2 to Part 1.
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.