

# Natural Surface Treatment

## Jojoba Esters Treatment (NJE)\*\*

Hydrogenated jojoba oil is a straight chain ester of 36 to 46 carbons in length. It does not have branching or points of unsaturation and contains terminal methyl groups at each end. As with jojoba oil there is no triglyceride component. Through hydrogenation of the colorless, flavorless jojoba oil, a functional and exceptionally pure, white solid is produced. Because of its high melting point the treatment is stable at high temperatures.

Kobo's patent pending process enables pigment particles to be rendered hydrophobic with this treatment.

Jojoba Esters have similar properties to the human sebum, which help to balance the sebum on the skin. They can contribute to moisturizing dry skin while easing sebum production in oily skin. Due to the natural origin of this treatment, it is ideal for use in formulas containing natural claims.

NJE treated pigments and powders offer a creamy feel and a good affinity to the skin. They are recommended for use in powders due to their good pressability, as well as emulsions and hot pours.

**\*\*Patent Pending**

Trade Name	INCI Name	Product Type
BBO-NJE2*	Iron Oxides (C.I. 77499) (And) Jojoba Esters	Black Iron Oxides
BRO-NJE2*	Iron Oxides (C.I. 77491) (And) Jojoba Esters	Red Iron oxides
BYO-NJE3*	Iron Oxides (C.I. 77492) (And) Jojoba Esters	Yellow Iron Oxides
Red 7CA K-NJE2	Red 7 Lake (And) Jojoba Esters	D&C Red 7 Calcium Lake
RBTD-671-NJE2*	Titanium Dioxide (And) Jojoba Esters	Pigmentary Titanium Dioxide
KoboMica L-27-NJE2*	Mica (And) Jojoba Esters	Mica
GMS-NJE3*	Mica (And) Jojoba Esters	Sericite
Talc N-NJE2*	Talc (And) Jojoba Esters	Talc
ZnO XZ-NJE5	Zinc Oxide (And) Jojoba Esters	Attenuation Grade Zinc Oxide
ZnO-C-NJE3*	Zinc Oxide (And) Jojoba Esters	Non-Nano Zinc Oxide
TTO-NJE8*	Titanium Dioxide (And) Alumina (And) Jojoba Esters	Non-Nano Titanium Dioxide
<small>New</small> TEL-100-NJE5*	Titanium Dioxide (And) Jojoba Esters (And) Silica (And) Alumina	Non-Nano Titanium Dioxide
MT-500B-NJE5	Titanium Dioxide (And) Jojoba Esters	Attenuation Grade Titanium Dioxide
MPT-154-NJE8*	Titanium Dioxide (And) Alumina (And) Jojoba Esters	Non-Nano Titanium Dioxide
UV Balance Powder 100-NJE8	Titanium Dioxide (And) Alumina (And) Jojoba Esters	Attenuation Grade Titanium Dioxide

## Natural-Treated Mineral Powder with SPF

Formula KPW-007A

### Part 1

- **GMS-NJE3** - Kobo Products: *Mica (And) Jojoba Esters* 73.40%
- **TTO-NJE8** - Kobo Products: *Titanium Dioxide (And) Alumina (And) Jojoba Esters* 15.00%
- **RBTD-671-NJE2** - Kobo Products: *Titanium Dioxide (And) Jojoba Esters* 5.00%
- **BYO-NJE3** - Kobo Products: *Iron Oxides (C.I. 77492) (And) Jojoba Esters* 5.00%
- **BRO-NJE2** - Kobo Products: *Iron Oxides (C.I. 77491) (And) Jojoba Esters* 1.00%
- **BBO-NJE2** - Kobo Products: *Iron Oxides (C.I. 77499) (And) Jojoba Esters* 0.60%

### Manufacturing Procedure

Pass premixed Part 1 through a micropulverizer or suitable equipment until color is fully extended.

### Description

A Natural-Treated Mineral Powder that shows excellent color development, adhesion to skin, and even application due to Kobo's Natural Jojoba Ester Treatment. TTO-NJE8 is the Jojoba Ester Treated Titanium Dioxide that contributes to SPF.

# KOBO

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# Natural Surface Treatment

## Carnauba Wax Treatment (CW)

Carnauba Wax is a vegetable wax obtained from the leaves of a Brazilian palm tree (Copernicia Cerifera) which has both hypoallergenic and emollient properties. It is among one of the hardest natural waxes with a melting point of 75°C and can be used in cosmetics for its thickening properties. Kobo's Carnauba Wax (CW) surface treatment renders pigments and powders

hydrophobic and enables them to offer a creamy, soft feel with good adhesion to the skin. They are recommended for use in powders to improve pressability and stability.

Trade Name	INCI Name	Product Type
BBO-CW4	Iron Oxides (C.I. 77499) (And) Copernicia Cerifera (Carnauba) Wax	Black Iron Oxides
BRO-CW4	Iron Oxides (C.I. 77491) (And) Copernicia Cerifera (Carnauba) Wax	Red Iron Oxides
BYO-CW4	Iron Oxides (C.I. 77492) (And) Copernicia Cerifera (Carnauba) Wax	Yellow Iron Oxides
RBTD-671-CW4	Titanium Dioxide (And) Copernicia Cerifera (Carnauba) Wax	Pigmentary Titanium Dioxide
Rose Talc-CW5	Talc (And) Copernicia Cerifera (Carnauba) Wax	Talc
Sericite UW-A5	Mica (And) Carnauba Wax	Mica

## Natural Sunscreen

Formula KSL-162

SPF 32  
PFA 11

### Part 1

- Jojoba Oil - Desert Whale Jojoba Co., Inc: Simmondsia Chinensis (Jojoba) Seed Oil 28.25%
- **JOSP55XZJ** - Kobo Products: Zinc Oxide (And) Simmondsia Chinensis (Jojoba) Seed Oil (And) Polyhydroxystearic Acid (And) Jojoba Esters 26.00%
- **JOSP55TJ** - Kobo Products: Titanium Dioxide (And) Simmondsia Chinensis (Jojoba) Seed Oil (And) Polyhydroxystearic Acid (And) Jojoba Esters 13.00%
- Carnauba Wax SP 63P - Strahl & Pitsch: Copernicia Cerifera (Carnuaba) Wax 7.50%
- Tocopherol - Cognis : Tocopherol 0.25%

### Part 2

- **MSS-500/N** - Kobo Products: Silica 20.00%
- **MSS-500/20N** - Kobo Products: Silica 5.00%

### Manufacturing Procedure

**\*Heavy Mixing Required\***

1. Combine Part 1 and heat to 80°C.
2. Mix Part 1 under propeller.
3. Add Part 2 slowly to Part 1 and mix under propeller.
4. Continue to mix to 25°C and pour into containers.

### Description

This all-natural sunscreen uses Kobo's Titanium Dioxide Dispersion JOSP55TJ, and Kobo's Zinc Oxide Dispersion, JOSP55XZJ to achieve SPF. JOSP55TJ uses Jojoba Ester treated Titanium Dioxide (MT-500B-NJE5) and JOSP55XZJ uses Jojoba Ester treated Zinc Oxide (ZnO XZ-NJE5) dispersed into Jojoba Oil. Kobo's MSS-500/N and MSS-500/20N are used to give a dry afterfeel. Carnauba Wax is used to thicken and stabilize the formula, and Vitamin E (Tocopherol) is added as an antioxidant.

### Active Ingredients:

Titanium Dioxide = 6.80%  
Zinc Oxide = 13.50%

SPF testing: In-Vivo on 3 Subjects

**\*Note these products are Ecocert compliant**

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