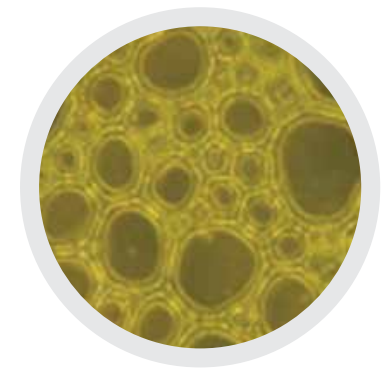


Ikeda Esters



iKeda



COSMOL™ 43N

INCI Name: *Polyglyceryl-2 Triisostearate*

Appearance: Colorless to pale yellow liquid oil

Properties:

- The tri-ester of multiple branched isostearic acid and diglycerin
- High viscosity at 20°C: 35,210 mPa.s

Applications: Emulsions, Gels, Hot Pours

COSMOL™ 43V

INCI Name: *Polyglyceryl-2 Triisostearate*

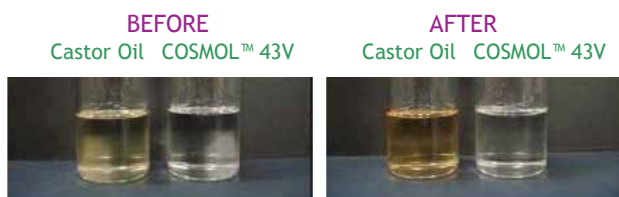
Appearance: Colorless liquid

Properties:

- High polar fatty acid ester consisting of isostearic acid and diglycerin while also containing hydroxyl groups in the molecule
- Viscosity at 20°C: 448 mPa.s.
- Alternative to castor oil
- Superior to castor oil in oxidative stability, compatibility with oils in organic solvents, miscibility, pigment dispersing ability, and sweat prevention in solid cosmetics

Stability: No significant change in color or odor during heat testing (120°C for 24 hours)

Applications: Emulsions, Gels, Hot Pours



Effect on color during heat testing

COSMOL™ 168ARV

INCI Name: *Dipentaerythrityl Hexahydroxy Stearate/Hexastearate/Hexarosinate*

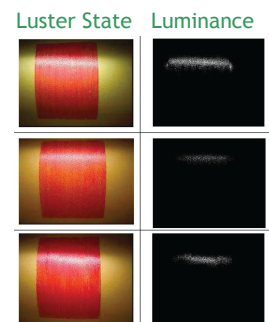
Appearance: Pale yellow to yellow paste oil

Properties:

- Substitute for wool-derived lanolin
- Superior oxidative stability, miscibility, water retaining ability, luster, and emollient capabilities
- Good hair conditioning ability as seen in the unity of hairs and combing ability testing
- Double ability to retain water over lanolin

Stability: No significant change in color or odor during heat testing (120°C for 24 hours)

Applications: Emulsions, Gels, Hot Pours, Powders



Luster state and luminance of lipstick on artificial skin (Top to bottom: COSMOL™ 168ARV, lanolin, control)

COSMOL™ 182V

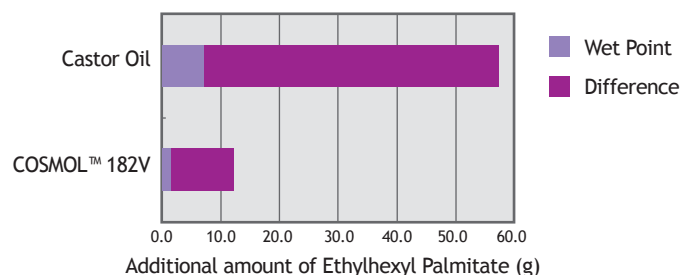
INCI Name: *Sorbitan Sesquiosostearate*

Appearance: Yellow or brown amber viscous liquid oil

Properties:

- Hydrophobic, Non-ionic emulsifier that contributes to product stability
- Good pigment dispersing ability compared to castor oil

Applications: Emulsions, Gels, Hot Pours



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COSMOL™ 222

INCI Name: *Diisostearyl Malate*

Appearance: Colorless to pale yellow liquid

Properties:

- A high polar di-ester
- Viscosity at 20°C: 5,500 mPa.s.
- Substitute for castor oil
- Superior to castor oil in oxidative stability and physical properties such as compatibility, water resistance, pigment dispersing ability, gloss and luster
- Compatible with hydrocarbon oils and silicone oils
- Helps control hardness of waxes and sweating in solid cosmetics

Stability: No significant change in color or odor during heat testing (120°C for 24 hours)

Applications: Emulsions, Gels, Hot Pours, Powders

COSMOL™ 525

INCI Name: *Neopentyl Glycol Diethylhexanoate*

Appearance: Pale yellow, viscous liquid

Properties:

- Di-ester of neopentyl glycol and branched medium chain acid
- Dissolves silicone ($\leq 3000\text{mm}^2/\text{s}$) due to the many branched-chains in the ester
- Low viscosity at 20°C: 14 mPa.s

Stability: Excellent heat stability due to hindered ester

Applications: Emulsions, Gels, Hot Pours, Powders

SALACOS® 99

INCI Name: *Isononyl Isononanoate*

Appearance: Colorless yellow liquid oil

Properties:

- Monoester of a branched medium length chain of an odd number alcohol with a branched medium lengthed chain of an odd number chain acid
- Dissolves high viscosity silicone (ability to dissolve silicone gum, viscosity > 1million mm^2/s)
- Low viscosity at 20°C: 6 mPa.s

Applications: Emulsions, Gels, Hot Pours, Pressed Powders

SALACOS® 334

INCI Name: *Caprylic/ Capric/ Myristic/ Stearic Triglyceride*

Appearance: White to light yellow, petrolatum-like substance

Properties:

- Synthetic butter with superior emollience compared to shea butter
- Melts gently at below body temperature
- Provides soft texture
- Excellent oxidative stability

Stability: Colorless liquid before and after heating

Applications: Emulsions, Gels, Hot Pours



SALACOS® 913

INCI Name: *Isotridecyl Isononanoate*

Appearance: Colorless to yellow liquid oil

Properties:

- Emollient ester
- Exhibits non-oily, nearly-dry properties
- Works to easily dissolve high viscosity silicones because of the presence of many branched methyl groups in its chemical structure

Applications: Emulsions, Gels, Hot Pours

SALACOS® 3318

INCI Name: *Triisostearin*

Appearance: Light yellow liquid oil

Properties:

- Low polar, high viscosity ester
- Enables enhanced adhesion and gloss in formulation
- Offers good compatibility with silicones (table 1 & figure 1)

Applications: Gels, Hot Pours



Figure 1. This image shows good compatibility of SALACOS® 3318 with silicone (30 cs) versus a competing material such as hydrogenated polyisobutene

SALACOS® 3318 : Oil Sample =1 : 1 (wt / wt)

Oil Sample	Result	Oil Sample	Result	Oil Sample	Result
MINERAL OIL	S	COSMOL 41V	IS	DIMETHICONE/PEG-10/15 CROSSPOLYMER, DIMETHICONE	PS
HYDROGENATED POLYISOBUTENE	S	COSMOL 42V	S	PEG-15/LAURYL DIMETHICONE CROSSPOLYMER, MINERAL OIL	IS
SQUALANE	S	COSMOL 43V	S	COSMOL 82	S
JOJOBA OIL	S	COSMOL 44V	S	POLYSORBATE 80	IS
OLIVE OIL	S	CYCLOPENTASILOXANE	S	BG	IS
CASTOR OIL	S	DIMETHICONE (10 cs)	S	ETHANOL	S
T.I.O	S	DIMETHICONE (30 cs)	S	GLYCERIN	IS
COSMOL 222	S	DIMETHICONE (50 cs)	IS	WATER	IS

S = soluble, PS= partially soluble (cloudy), IS=insoluble

Table 1. Shows the compatibility of SALACOS® 3318 with other materials

SALACOS® 5418V

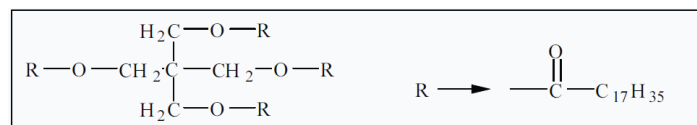
INCI Name: *Pentaerythrityl Tetraisostearate*

Appearance: Light yellow liquid oil

Properties:

- Gives rich feel to lip and skin care products
- Tetraester of Pentaerythritol and Isostearic Acid
- Low polarity
- Excellent heat stability

Applications: Emulsions, Gels, Hot Pours



SALACOS® HS-6C

INCI Name: *Polyhydroxystearic Acid*

Appearance: Light yellow-brown liquid or petrolatum-like substance

Properties:

- Provides a moisturizing effect on the skin even after washing
- Gives excellent overall texture for washing
- Excellent pigment dispersing agent with low wet point and same fluidity point
- Provides smooth texture to formulations containing pigments (Figure 2)

Applications: Emulsions, Gels, Hot Pours

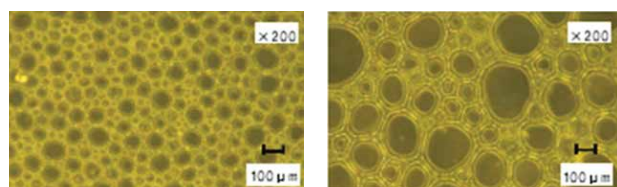


Figure 1. Elastic and stable, fine foaming properties of SALACOS® HS-6C (left) versus a control (right)



Figure 2. Effect of dispersing pigments using SALACOS® HS-6C (left) versus control (right), in a W/O sunscreen milk

SALACOS® P-8

INCI Name: *Ethylhexyl Palmitate*

Appearance: Colorless to pale yellow liquid

Properties:

- Monoester of 2-ethylhexyl alcohol and palmitic acid
- Low viscosity at 20°C: 13 mPa.s

Applications: Emulsions, Gels, Hot Pours, Pressed Powders

SALACOS® WO-6

INCI Name: *Dipentaerythrityl Tri-Polyhydroxystearate*

Appearance: Light yellow to yellow liquid

Properties:

- Water-retaining emollient polymer
- Stabilizing potential in W/O emulsions
- Good pigment dispersing ability
- Improves the manageability of hair such as making hair less frizzy and easier to comb

Applications: Emulsions, Gels, Hot Pours

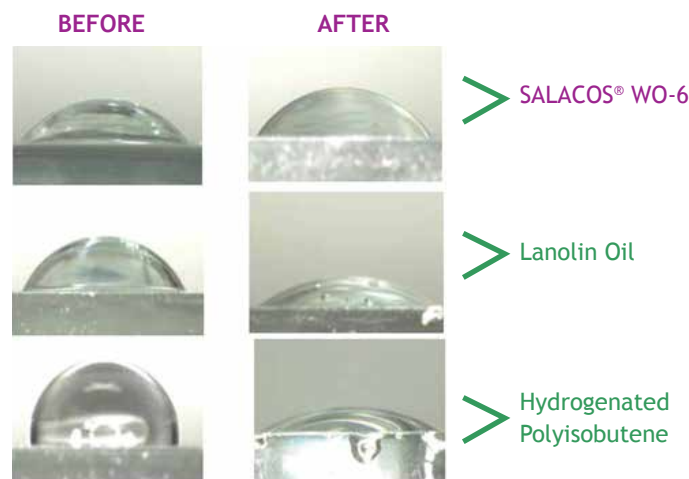


Figure 1. The before state of a water droplet on an oil film and the state of the droplet after it is rinsed off with tap water show the waterproof film ability of SALACOS® WO-6. The delta of SALACOS® WO-6, lanolin oil, and hydrogenated polyisobutene are 4.3, 32.5, and 73.4 respectively

New **T.I.O.**

INCI Name: *Triethylhexanoin*

Appearance: Colorless to pale yellow liquid oil

Properties:

- Triester of glycerin and branched medium chain acid
- Low congealing point due to branched alkyl. ($\leq -30^{\circ}\text{C}$)
- Viscosity lower than natural triglyceride (30mPa.s/ 20°C)
- Excellent oxidation and hydrolysis stability
- Superior to Caprylic/Capric Triglyceride in hydrolysis resistance, stability on skin and physical properties such as compatibility and cold stability

Applications: Emulsions, Hot Pours



KLP-160-BR

Cashmere Lipstick

Part 1

- Deionized Water - Water 15.15%
- Glycerin - CAAL: *Glycerin* 1.00%
- Sodium Chloride - CAAL: *Sodium Chloride* 0.50%

Part 2

- **SALACOS® 5418V** - Ikeda/Kobo Products: *Pentaerythrityl Tetraisostearate* 14.00%
- **INBP50R6B** - Kobo Products: *Red 6 Lake (And) Isononyl Isononanoate (And) Isopropyl Myristate (And) Stearalkonium Hectorite (And) Isopropyl Titanium Triisostearate (And) Propylene Carbonate (And) Polyhydroxystearic Acid* 10.40%
- **INBP45R7C** - Kobo Products: *Red 7 Lake (And) Isononyl Isononanoate (And) Isopropyl Myristate (And) Stearalkonium Hectorite (And) Isopropyl Titanium Triisostearate (And) Propylene Carbonate (And) Polyhydroxystearic Acid* 7.90%
- **VEGETABLE WAX-SS1 (Non-GMO)** - Ikeda/Kobo Products: *Helianthus Annuus (Sunflower) Seed Wax (And) Phytosterols* 6.00%
- **Abil® EM 90** - Evonik: *Cetyl PEG/PPG-10/1 Dimethicone* 5.50%
- **INBP70U** - Kobo Products: *Titanium Dioxide (And) Isononyl Isononanoate (And) Isopropyl Myristate (And) Stearalkonium Hectorite (And) Isopropyl Titanium Triisostearate (And) Propylene Carbonate (And) Polyhydroxystearic Acid* 4.40%
- **PM WAX 82** - Kobo Products: *Polyethylene (And) Microcrystalline Wax* 4.00%
- **COSMOL™ 222** - Ikeda/Kobo Products: *Diisostearyl Malate* 3.00%
- **NOMCORT® HK-G** - Ikeda/Kobo Products: *Glyceryl Behenate/Eicosadioate* 3.00%
- **CO40SS** - Kobo Products: *Sodium Saccharin (And) Ricinus Communis (Castor) Seed Oil (And) BHT* 0.15%

Part 3

- **KF-995** - Shin-Etsu: *Cyclopentasiloxane* 16.00%
- **DAIMICBEAZ CM-1077** - Kobo Products: *HDI/Trimethylol Hexyllactone Crosspolymer (And) Silica Silylate* 8.00%
- **Optiphen** - Ashland: *Caprylyl Glycol (And) Phenoxyethanol* 1.00%

Manufacturing Procedure

1. Add Part 2 ingredients to the main vessel and heat under stirring to 80°C and complete dispersion of pigments.
2. Pre-mix Part 1 ingredients and heat to $75-80^{\circ}\text{C}$.
3. Add Part 1 to Part 2 slowly while mixing at 800 rpm.
4. Cool to $65-70^{\circ}\text{C}$ and add Part 3 ingredients.
5. Mix for 10 minutes at 800 rpm.
6. Mix at low speed to remove air and pour into components.

Description

This emulsified lipstick features INBP dispersions in Isononyl Isononanoate that can ease the manufacturing process and provide more vivid color. **COSMOL™ 222** is a pigment dispersant that offers great stability against oxidation and **SALACOS® 5418V** is a high refractive index ester that can improve skin feel. **VEGETABLE WAX-SS1 (Non-GMO)** creates a high-luster lipstick and is used to structure the formulation in association with **PM WAX 82**, a combination of waxes, and with **NOMCORT® HK-G**, an oil phase gellant that can also improve formula stability. **CO40SS** is a sodium saccharin dispersion to give a slight sweet taste. **DAIMICBEAZ CM-1077** is a polymer microsphere that improves feel and application.