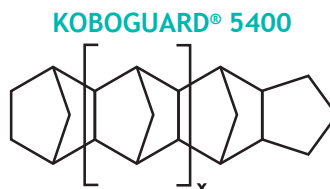


# KOBOGUARD® 5400

## Oil soluble film former

KOBOGUARD® 5400 is an oil soluble polymer that helps to enhance adhesion and substantivity of the cosmetic formulation to the skin, lashes, hair or nail. Therefore, it improves water-resistance, rub-resistance, and stability of the film, imparts gloss and helps suspend pigments. It has no odor and excellent color stability which makes it an ideal substitute for rosins and their counterparts. Its recommended levels of use in formulation are 5-20% actives.



INCI Name : Hydrogenated Polycyclopentadiene  
 CAS# : 68132-00-3  
 Average molecular weight : 500  
 Glass Transition Temperature (Tg) : 54 °C  
 Specific Gravity : 1.10  
 Refractive Index : 1.55 - 1.57

Product Name	INCI Name	Active
KOBOGUARD® 5400 IDD	Hydrogenated Polycyclopentadiene (And) Isododecane	70%
KOBOGUARD® 5400 CCT	Hydrogenated Polycyclopentadiene (And) Caprylic/Capric Triglyceride	50%
KOBOGUARD® 5400 SQ	Hydrogenated Polycyclopentadiene (And) Squalane	50%

All ingredients in these solutions are vegetable, mineral or synthetically derived.

## Volumizing Mascara with SPC/BLACK NF-12

Formula KMA-035B

### Part 1

- Beeswax White SP 422 - Strahl & Pitsch, Inc.:  
Beeswax 8.00%
- Ozokerite Wax White SP 1020 - Strahl & Pitsch, Inc.:  
Ozokerite 5.00%
- Carnauba Wax SP 63 - Strahl & Pitsch, Inc.:  
Copernicia Cerifera (Carnauba) Wax 3.00%
- Dermofat 4919 - Alzo International Inc.:  
Stearic Acid 3.00%
- Microcrystalline Wax SP-89 - Strahl & Pitsch, Inc.:  
Microcrystalline Wax 3.00%
- **KOBOGUARD® 5400 SQ** - Kobo Products:  
Hydrogenated Polycyclopentadiene (And)  
Squalane 2.00%
- Liposorb® SQO - Vantage: Sorbitan  
Sesquioleate 1.00%

### Part 2

- Deionized Water - Water 33.15%
- **W60BBNFAP-O** - Kobo Products:  
Iron Oxides (CI 77499) (And) Water (And)  
Ammonium Polyacrylate 15.00%
- TEAlan 99% - RITA Corp.: TriethanolAmine 1.00%
- Natrosol® 250 HHR CS - Hercules-Aqualon:  
Hydroxyethylcellulose 0.30%

### Part 3

- Deionized Water - Water 6.00%
- Jeecide CAP-5 - Jeen International:  
Phenoxyethanol (And) Caprylyl Glycol (And)  
Potassium Sorbate (And) Water  
(And) Hexylene Glycol 0.90%
- Germall® 115 - ISP: Imidazolidinyl Urea 0.15%

### Part 4

- **WSJ10CB-NP** - Kobo Products:  
Black 2 (And) PEG-40 Hydrogenated Castor  
Oil (And) Water (And) Acrylates/Ethylhexyl  
Acrylate Copolymer (And) Aminomethyl  
Propanol (And) Sodium Dehydroacetate 15.00%
- **SPC/BLACK NF-12** - Kobo Products: Iron  
Oxides (CI 77499) (And) Ethylene/  
Methacrylate Copolymer (And) Isopropyl  
Titanium Triisostearate 3.50%

### Manufacturing Procedure

1. Heat Part 1 to 80 °C in auxiliary tank.
2. In Part 2 while heating, add Natrosol® 250 HHR CS to deionized water under propeller mixing. Mix until Natrosol® 250 HHR CS is fully hydrated. Add the rest of Part 2. Heat to 80 °C
3. Add Part 1 to Part 2 in main tank with propeller and sweep agitation at 80 °C.
4. Cool to 50 °C.
5. Add Part 3 ingredients at 50 °C.
6. Add Part 4 at 45 °C.
7. Cool to 25-27 °C.

### Description

This long-wear mascara contains Kobo's pigmentary dispersions WSJ10CB-NP and W60BBNFAP-O for intense, deep, black color. The WSJ10CB-NP also benefits the formula by adding film-forming properties. Kobo's resin composite, KOBOGUARD® 5400 SQ, gives quick build up with a water-resistant film, and aids in long wear. SPC/BLACK NF-12 hollow Microsphere complex with ITT adds building effect to the lashes.



# KOBO

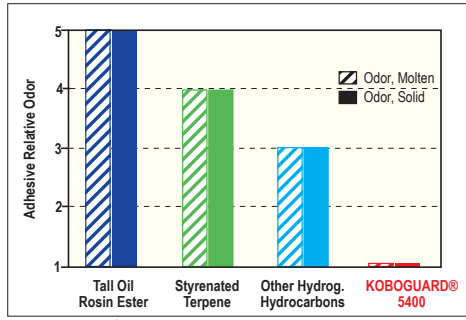
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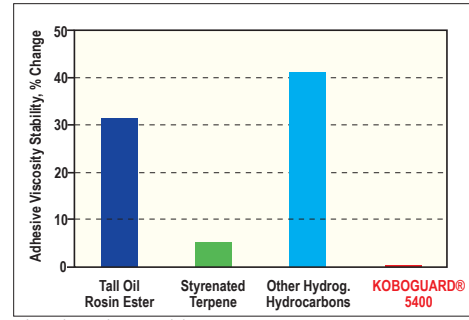
# KOBOGUARD® 5400

## Odor relative to other film-formers



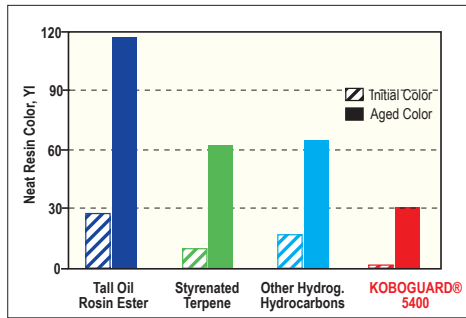
Panel test ratings 1=excellent, 5=poor

## Viscosity Stability



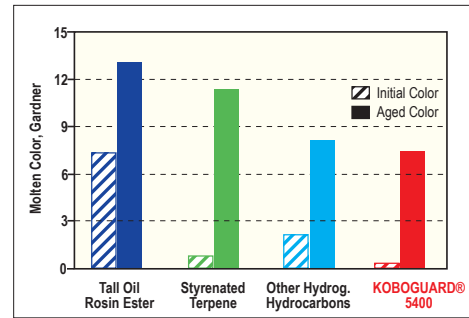
Viscosity aging condition: 96 hours @177° C

## Neat Resin Color (Solid powder)



Aged Color = 5 hours @ 175° C

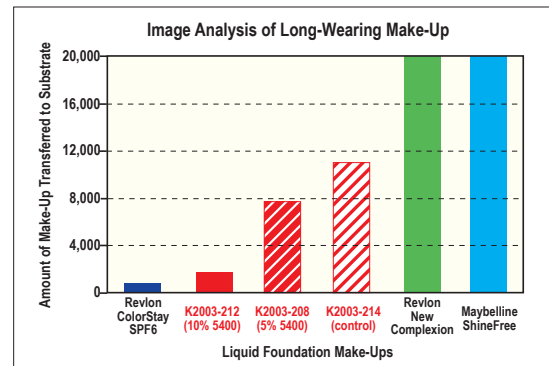
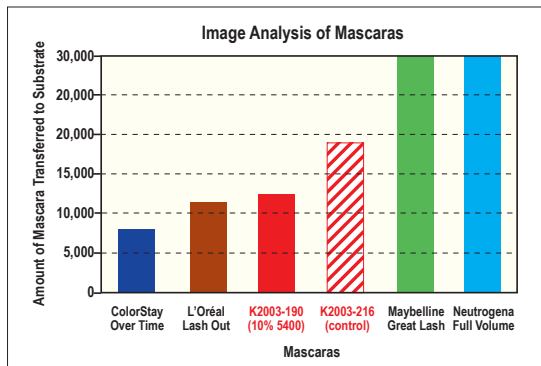
## Molten Color (Viscous liquid)



Aged Color condition: 96 hours @177° C

## How does KOBOGUARD® 5400 work in color cosmetics and sunscreen systems ?

- KOBOGUARD® 5400 helps in creating a continuous film when present in sufficient concentration
- The film encapsulates the pigments and binds them, imparting water-resistance and film stability on the skin, preventing creasing
- The adhesive properties of KOBOGUARD® anchor the pigment particles to the skin, improving the rub-resistance



## KOBOGUARD® 5400 vs. Rosins

- Rosins have variable properties as a result of their natural origin and structure
- Directional agreement in a number of areas, including the cosmetic industry, to avoid the use of rosin and derivatives due to their allergenic profile
- High odor and color changes are sometimes associated with rosins and derivatives

## Modifying KOBOGUARD® 5400 Properties

- The addition of Microspheres to a KOBOGUARD® based formulation will decrease 'tack'
- KOBOGUARD® 5400 may be used in combination with other hydrocarbon-based polymers such as polyethylene or polybutene to further improve the film-forming properties

**KOBO**

[www.koboproducts.com](http://www.koboproducts.com)