
Film Formers

Kobo Products, Inc.

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KOBO
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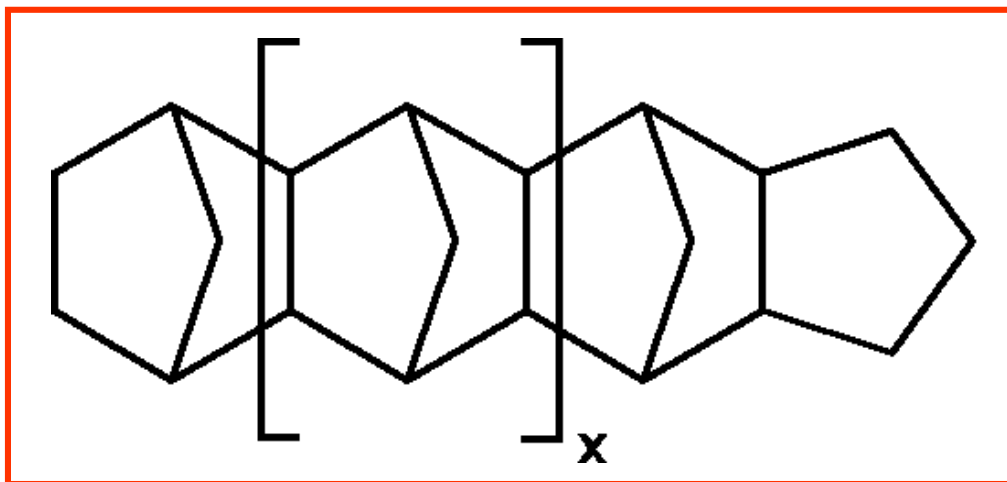
- Oil Compatible (Koboguard 5400)
- Powdered Silicone MQ Resin

Koboguard 5400

- Highly oil compatible polymer that is an excellent substitution for products that incorporate materials derived from rosins and their counterparts.
- Cosmetic grade
- Synthetically derived
- Enhances the performance of cosmetic products.

Technical Data

- INCI Name: Hydrogenated Polcyclopentadiene
- CAS# : 68132-00-3



- Average molecular weight : 500
- Glass Transition Temperature (Tg) : 54° C
- Softening Point : 103° C
- Refractive Index : 1.55 - 1.57

Availability

Trade Name	Solvent	Active
Koboguard 5400 IDD	Isododecane	70%
Koboguard 5400 CCT	Caprylic/Capric Triglyceride	50%
Koboguard 5400 SQ	Squalane	50%

- All materials for these solutions are vegetable, mineral or synthetically derived.

Koboguard 5400 vs. Rosins

- Rosins have wider variability of 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.

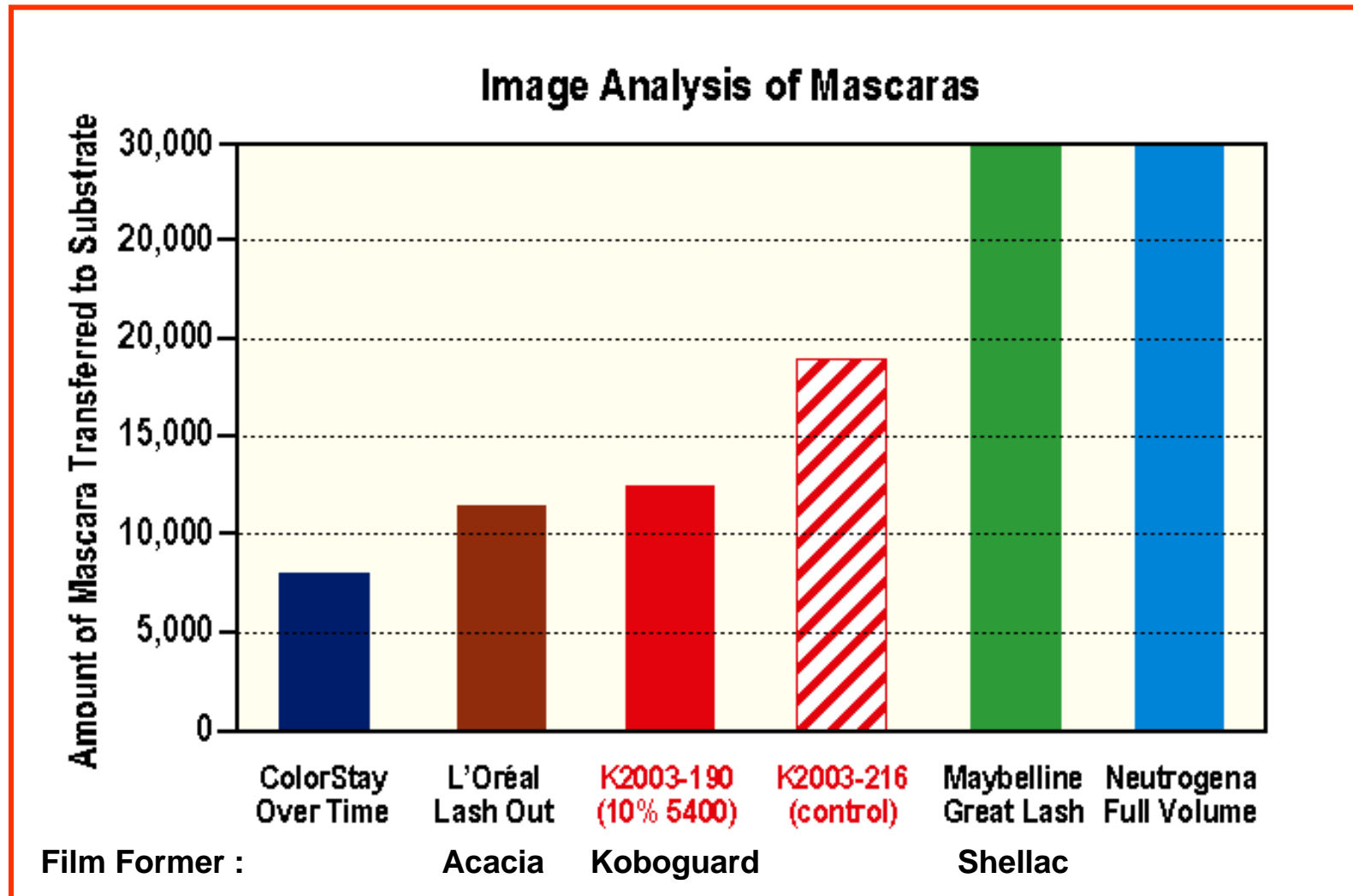
Koboguard 5400 in Formulations

- Ease of processing and incorporation into formulations.
- Adhesive film-forming properties improve long wear for decorative cosmetic, sunscreen and skin care products.
- Water-resistant
- Improves rub-resistance
- Imparts gloss
- Helps to suspend pigments
- Low odor and good color stability

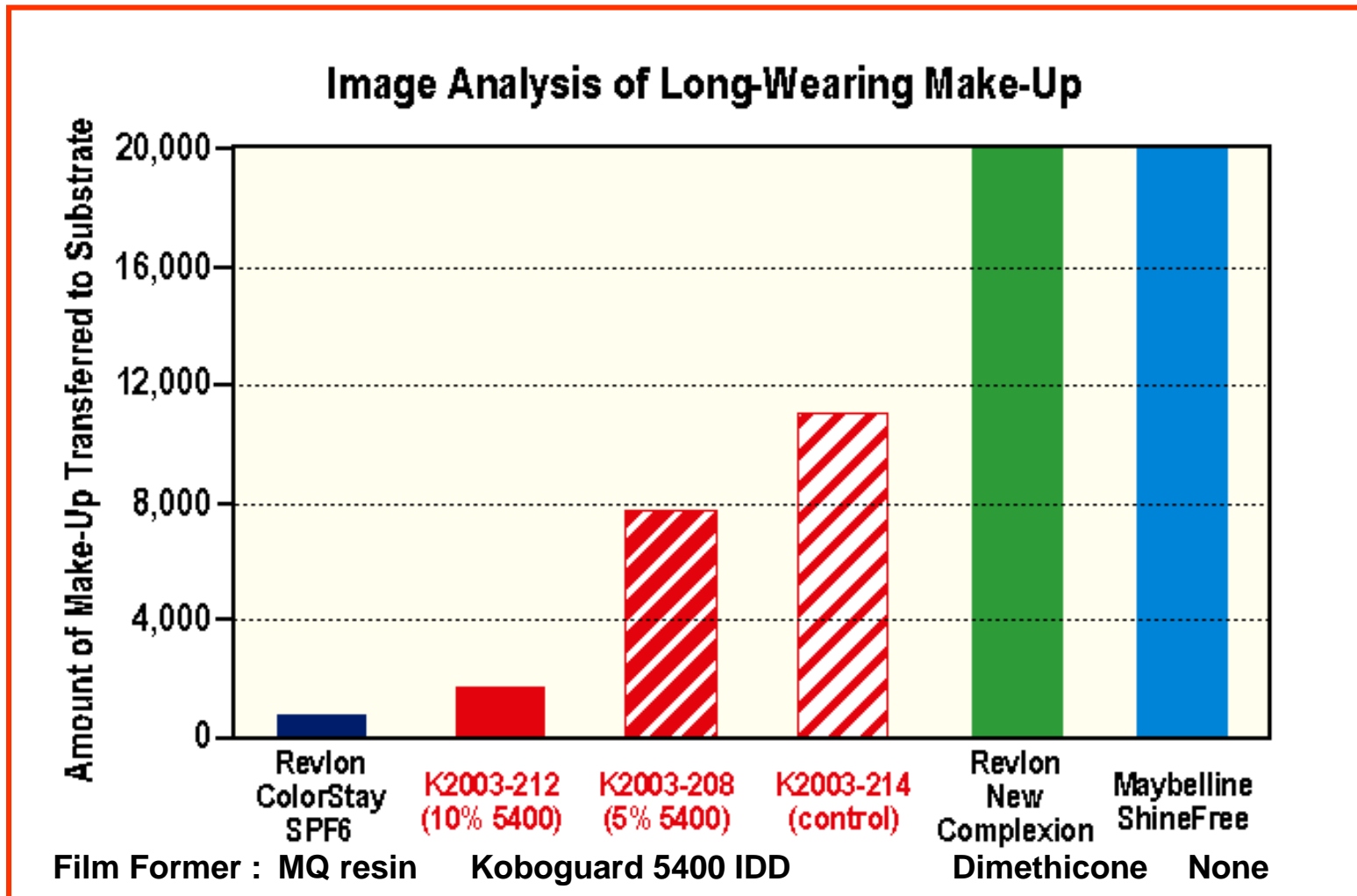
How does Koboguard 5400 work in color cosmetics and sunscreen systems?

- 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.

Transfer - Mascara



Transfer - Make-Up



Koboguard 5400 Compatibility

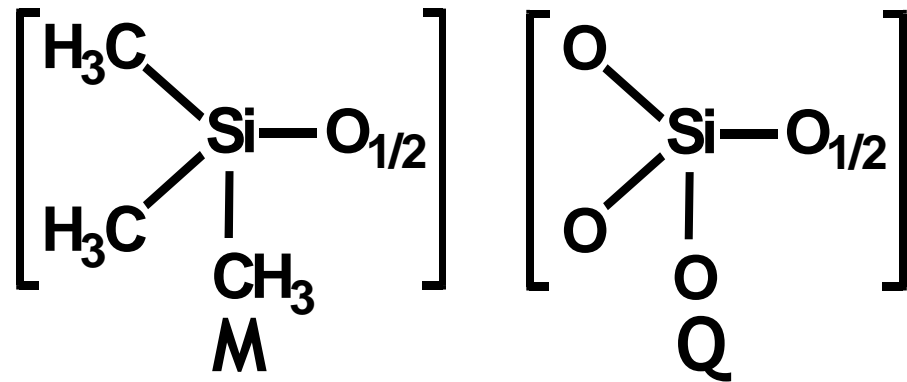
- Koboguard 5400 is compatible with a wide range of film formers, including MQ-resins, acrylates, acrylate/silicone copolymers and other hydrocarbon-based polymers such as polyethylene or polybutene, to further improve the film-forming properties.
- The addition of Microspheres to a Koboguard 5400-based formulation will decrease 'tack'.

Koboguard 5400 - Patent Status

- L'Oréal - US patent application 2006/0013839
Shine-enhancing film former
- Avon - US patent application 2006/0134035 and
WO 2006068717
*Long wear topical composition having improved glossy
appearance*
- Avon - US Patent Application 2006/0134035
*Long wear topical composition having improved glossy
appearance*
- Revlon - US patent application 2006/0067960
Color Cosmetic Composition

Silicone Based Film Formers

Silicone MQ Resin : Trimethylsiloxysilicate



- Product form : 100% actives solid available in Cyclomethicone (D5) or Dimethicone
- Resin provides good adhesion to the skin and pigments/actives
- Volatile silicone carrier is more suitable : Cyclomethicone (D5) evaporates leaving behind the resin and actives

Powdered Silicone MQ Resin

Benefits

- Highly substantive on skin
- Smooth non-tacky feel
- Excellent film former
- Versatility of carrier choice

Applications

- Sunscreen products
- Hand lotions
- Make-up
- Skin care
- Cosmetics

MQ-Resin solutions

Koboguard MQ75ETS, Koboguard MQ60DM, Koboguard MQ65TMF :

- Solutions are alternatives to Cyclopentasiloxane (Ethyl Trisiloxane, volatile Dimethicone).
- Advantages : ease of use, non dusting, minimized solvent handling, safety, improved product quality

Summary

- Koboguard 5400 is highly oil compatible polymer (Hydrogenated Polycyclopentadiene).
- Helps to improve adhesion and substantivity of the cosmetic film to the skin, lashes, hair or nail.
- Improves water resistance and stability of the film.
- Recommended levels are 5-20% actives.
- Excellent alternative to Rosin based derivatives.