

Composite ACCB-33

Non-Nano Composite CB Powder

Carbon Black provides deep, intense color due to small particle sizes but is within the nano size limits. Across industry, solutions have varied for companies that do not want to report nano products in their formulas. Completely abandoning the use of nano-particles means discarding high performing raw materials *however an alternative is a material that offers the perceived benefits of nano-materials but in micron sized form.* An innovative solution is the concept of dispersed nano-particles encapsulated in a micron sized acrylate copolymer. This patent pending technology initiates the process with a dispersion having already decreased the aggregate size then continuously controls and maintains against re-agglomeration ensuring enhanced efficacy of this material. The outer matrix of the composite allows for a micron sized powder with mechanical resistance during use and enhanced tactile properties in application.



Fig. 1: Image showing comparable, if not better, performance of mascara made with Composite ACCB-33 as opposed to a formula containing both Black 2 (CI 77266) and microspheres (left and right, respectively)

Composite ACCB-33

A Black 2 (CI 77266) encapsulated in an acrylate copolymer matrix composite with concentrations ranging from 25-40%. The finished non-nano powder has a particle size range of 7-12µm and is typically used in mascara and eyeliner formulations. Composite ACCB-33 is able to provide excellent results in color, volume and tactility all while being at the micron scale.

- Suitability in mascara and eyeliner formulations is due to the ability to offer additional color intensity when used in combination with black iron oxide.
- The spherical nature and size of these particles impart volume in mascaras without the potential of resulting in the undesirable "graying effect" commonly seen when adding white microspheres.
- This material can also be used for its thickening properties resulting from its oil absorption nature.
- Uniquely, this product has the ability to be employed as a 2-in-1 benefit (Figure 1) to create volumizing effects and higher payoff than a volumizing formula containing both a CB dispersion and microspheres.

INCI: Kaolin (And) Black 2 (And) Acrylates Copolymer (And) Sodium Polyacrylate

Volumizing Mascara with Non-Nano Carbon Black Composite

Formula KMA-041B

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%
• Butylene Glycol - Ruger Chemical Co., Inc.:	
• Butylene Glycol	2.00%
• KOBOGUARD® 5400 SQ - Kobo Products:	
• Hydrogenated Polycyclopentadiene (And) Squalane	2.00%
• Microcrystalline Wax SP-89 - Strahl & Pitsch, Inc.:	
• Microcrystalline Wax	2.00%
• Liposorb® SQO - Vantage: Sorbitan Sesquioleate	1.00%
• SAG730 - Momentive:	
• Water (And) Dimethicone (And) Sorbitan Stearate (And) PEG-40 Stearate (And) Silica	0.30%

Part 2

• Deionized Water	34.65%
• W60BBNFAP-O - Kobo Products:	
• Iron Oxides (CI 77499) (And) Water (And) Ammonium Polyacrylate	13.00%
• TEAlan 99% - RITA Corp.:	
• TriethanolAmine	1.00%
• Natrosol® 250 HHR CS - Hercules-Aqualon:	
• Hydroxyethylcellulose	0.30%

Part 3

• DAITOSOL 5000SJ - Daito/Kobo Products:	
• Acrylates/Ethylhexyl Acrylate Copolymer (And) Water	10.50%

Part 4

• Deionized Water	6.00%
• Jeecide CAP-5 - Jeen International:	
• Phenoxyethanol (And) Caprylyl Glycol (And) Potassium Sorbate (And) Water (And) Hexylene Glycol	0.60%
• Germall® 115 - ISP:	
• Imidazolidinyl Urea	0.15%

Part 5

• COMPOSITE ACCB-33 - Kobo Products:	
• Kaolin (And) Black 2 (And) Acrylates Copolymer (And) Sodium Polyacrylate	7.50%

Manufacturing Procedure

1. Heat Part 1 to 80°C with sweep blade 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.
3. Heat Part 2 to 80°C with homogenizer at 2500 rpm.
4. Add Part 1 to Part 2 with homogenizer at 80°C and continue to homogenize 15 minutes at 4000 rpm. Continue to cool batch while under the homogenizer until 50°C.
5. Add Part 3 to batch at 50°C with homogenizer. Once uniform, proceed to Step 6.
6. Add pre-mixed Part 4 at 50°C with homogenizer.
7. Followed by Part 5 at 50°C with homogenizer.
8. Switch to sweep blade mixing with low-medium speed and cool batch to 35°C.

Description

This long-wear mascara contains Kobo's non-nano carbon black COMPOSITE ACCB-33 for intense, deep, black color and volumizing properties. Kobo's resin composite, KOBOGUARD® 5400 SQ, gives quick build-up with a water-resistant film, and aids in long wear. DAITOSOL 5000SJ is used to produce a long-wearing film and provide water resistance. Kobo's pigmentary dispersion, W60BBNFAP-O, is used in combination with COMPOSITE ACCB-33 to provide a deep black shade.



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