

Boosted Lash Volume with Natural Microspheres + Fibers



Proven synergy for BOLD, VOLUMINOUS mascara

Kobo's Application Lab has explored the power of combining silica microspheres with natural fibers. Together, cellulose fibers and silica microspheres work synergistically to boost volume, for a more dramatic eye look.

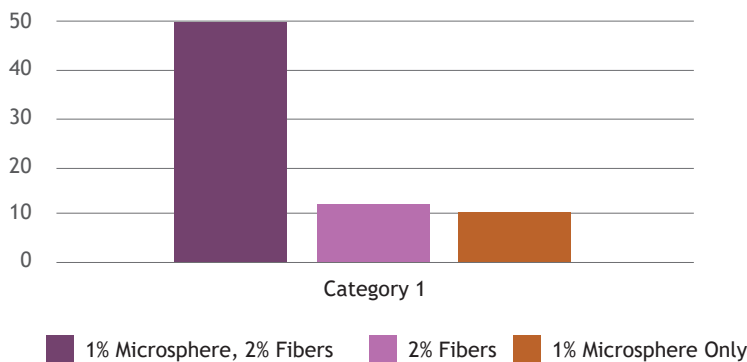


Method:

- Test mascaras were applied to false lashes with 20 strokes and let dry for 1 minute.
- Lashes were evaluated by optical microscope with average thickness being measured and pictures taken.
- These images were then analyzed by image J software to determine the average area coverage.

Results

% Volume Increase Vs. Control



CELL-U-LASH™ 40, CELL-U-LASH™ 150 and EXCEBEADS™ CS-725 synergize, creating volume % increase of 50% vs 22% when incorporated individually.

Kobo offers other fibers and non-porous microspheres of different diameters (up to 20 µm) that will also contribute to volume and length.

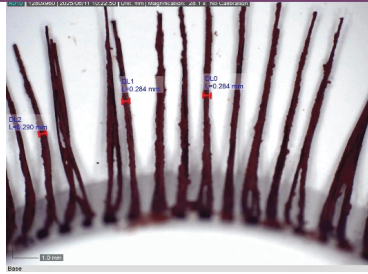
Image Analysis

Prototype

Microscope Measurements AVG Thickness (mm)

ImageJ Analysis % Area Coverage

KMA-110A:
CONTROL
No microsphere or fibers



AVG=0.286mm



% area= 12.677

KMA-110C:
1% EXCEBEADS™ CS-725



AVG=0.373mm



%area= 13.875

KMA-110B:
1% CELL-U-LASH™ 40 &
1% CELL-U-LASH™ 150
2% fibers total

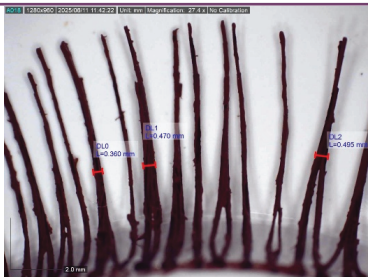


AVG=0.298mm



%area= 14.171

KMA-110-BR:
1% EXCEBEADS™ CS-725
1% CELL-U-LASH™ 40 & CELL-U-LASH™ 150
1% Microspheres & 2% Fibers



AVG=0.442mm



%area= 19.070

Recommended Kobo Products for Boosted Volume

Product Name	INCI Name	Product Type	Fiber Length	Particle Size
CELL-U-LASH™ 40	<i>Cellulose</i>	Fiber	20-25 µm	-
CELL-U-LASH™ 150	<i>Cellulose</i>	Fiber	80-110 µm	-
RAYON FIBER 3.3T-0.8MM(S)	<i>Rayon (And) Silica</i>	Fiber	640 -880 µm	-
EXCEBEADS™ CS-725	<i>Silica</i>	Microsphere	-	7 µm
EXCEBEADS™ CS-320	<i>Silica</i>	Microsphere	-	3.5 µm
MSS-500/3N	<i>Silica</i>	Microsphere	-	3 µm
MSS-500/N	<i>Silica</i>	Microsphere	-	12 µm
MSS-500/20N	<i>Silica</i>	Microsphere	-	20 µm



KMA-110-BR

Brownie Mascara

Part 1

- Glycerin - *Glycerin* 2.00%
- SOLAGUM AX - Seppic: *Acacia Senegal Gum (And) Xanthan Gum* 0.30%

Part 2

- Carnauba Wax - Fenix Ceras: *Carnauba Wax* 9.00%
- Beeswax - Cosmotec: *Beeswax* 5.00%
- CETIOL ULTIMATE - BASF: *Undecane (And) Tridecane* 5.00%
- POLYAQUOL 2W - INNOVACOS: *Polyglyceryl-2 Stearate (and) Glyceryl Stearate (and) Stearyl Alcohol* 4.00%

Part 3

- KOBOGUARD® 5400 IDD - Kobo Products: *Hydrogenated Polycyclopentadiene (And) Isododecane* 10.00%

Part 4

- SunBoost AEB Natural - Kobo Products: *Argania Spinosa Kernel Oil (And) Tocopherol (And) Bisabolol* 2.00%

Part 5

- CELL-U-LASH™ 150 - Kobo Products: *Cellulose* 1.00%
- CELL-U-LASH™ 40 - Kobo Products: *Cellulose* 1.00%
- EXCEBEADS™ CS-725 - Kobo Products: *Silica* 1.00%

Part 6

- WSJ22ERAMP-O - Kobo Products: *Water (And) Acrylates/Ethylhexyl Acrylate Copolymer (And) Iron Oxides (CI 77491) (And) Sodium Acrylate/Sodium Acryloyldimethyl Taurate Copolymer (And) Aminomethyl Propanol* 8.50%
- WSJ24UBAMP-O - Kobo Products: *Water (And) Acrylates/Ethylhexyl Acrylate Copolymer (And) Ultramarines (And) Sodium Acrylate/Sodium Acryloyldimethyl Taurate Copolymer (And) Aminomethyl Propanol* 8.6%

- WSJ28PFAMP-O - Kobo Products: *Water (And) Acrylates/Ethylhexyl Acrylate Copolymer (And) Titanium Dioxide (And) Sodium Acrylate/Sodium Acryloyldimethyl Taurate Copolymer (And) Alumina (And) Aminomethyl Propanol* 3.00%

Part 7

- KOBOGUARD® 50AMP-G - Kobo Products: *Acrylates/Ethylhexyl Acrylate Copolymer (And) Water (And) Aminomethyl Propanol* 5.00%
- EUXYL PE 9010 - Ashland: *Phenoxyethanol (And) Ethylhexylglycerin* 1.00%

Manufacturing Procedure

1. Weigh part 1 at the main vessel and mix until all ingredients are solubilized.
2. In an auxiliary vessel, combine the part 2 ingredients. Heat part 1 and part 2 simultaneously. When both phases are above 75°C, add part 2 to part 1 and mix at 1200 RPM for 5 minutes.
3. Add part 3 ingredient and mix.
4. Add part 4 ingredient and mix.
5. Add part 5 ingredients slowly, one by one, and mix.
6. Add part 6 ingredients one by one and mix.
7. Add part 7 ingredient and mix.
8. Add part 8 ingredient and mix for additional 3 minutes.
9. Pour at container.

Description

This brownish mascara features WSJ24UBAMP-O, WSJ22ERAMP-O and WSJ28PFAMP-O; dispersions in acrylic resin that creates the brown shade. For enhanced volume and length it combines EXCEBEADS™ CS-725—fused silica microsphere—along with CELL-U-LASH™ 40 and CELL-U-LASH™ 150 cellulose fibers. Long-wear performance is ensured with KOBOGUARD® 5400 IDD (oil-soluble film former) and KOBOGUARD® 50 AMP-G (water-dispersible film former). Additionally, it features SUNBOOST AEB NATURAL, a proprietary blend of Vitamin E, Bisabolol and Argan Oil, to condition and nourish lashes for a stunning finish.

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KMA-113C-EU

Electric Blue Lash Building Mascara

Part 1

• Deionised water	33.30%
• Glycerin - Interchemie: <i>Glycerin</i>	3.00%
• Butylene Glycol - Univar: <i>Butylene Glycol</i>	2.00%
• TEA 99% - Mapric: <i>TEA 99%</i>	1.80%
• Symdiol 68 - Symrise: <i>1,2-Hexanediol (And) Caprylyl Glycol</i>	0.50%
• Symsave H - Symrise: <i>Hydroxyacetophenone</i>	0.50%
• Avicel PC 611 - Earth Supplied Products: <i>Microcrystalline Cellulose (and) Cellulose Gum</i>	0.40%

Part 2

• Dermofat 4919 - Alzo International: <i>Stearic Acid</i>	4.50%
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Part 3

• Dub SSIC - Stearinerie Dubois: <i>Isocetyl Stearoyl Stearate</i>	10.00%
• BEUB-ASGP6 - Kobo Products: <i>Ultramarines (And) Stearoyl Glutamic Acid (And) Polyhydroxystearic Acid</i>	9.25%
• BTD-ASGP3 - Kobo Products: <i>Titanium Dioxide (And) Stearoyl Glutamic Acid (And) Polyhydroxystearic Acid</i>	1.75%

Part 4

• Beeswax - Cosmotec: <i>Beeswax</i>	4.50%
• DUB PTB - Eckart/BYK: <i>Pentaerythrityl Tetrabenenate</i>	4.50%
• Sunflower Wax - Koster Keunen: <i>Helianthus Annuus (Sunflower) Seed Wax</i>	4.50%
• Olivem 1000 - Hallstar: <i>Cetearyl Oliviate, Sorbitan Oliviate</i>	3.00%

Part 5

• MSS-500/3N - Kobo Products: <i>Silica</i>	1.00%
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Part 6

• KOBOGUARD® 50AMP-G - Kobo Products: <i>Acrylates/ Ethylhexyl Acrylate Copolymer (And) Water (And) Aminomethyl Propanol</i>	15.00%
• RAYON FIBER 3.3T-0.8MM(S) - Kobo Products: <i>Rayon (And) Silica</i>	0.50%

Manufacturing Procedure

1. Disperse Avicel PC 611 in water with high shear (square hole, 5000 rpm), then add remaining ingredients from Part 1.
2. Heat upto 70-75 degrees C and add Part 2 on stirring.
3. Disperse the pigments in Dub SSIC (5000 RPM, 5-7 min), once dispersed add to Part 4. Heat to 85 degrees C. Heat Part 1+2 to 90 degrees C.
4. Form the emulsion by adding Part 3+4 to Part 1+2 on magnetic stirrer, then homogenise at 3000 for 2-3 min
5. Cool under anchor stirrer for 15 min at 50 RPM
6. Add Part 5 at 40 degrees C and mix until homogenous.
7. Mix Part 6 and add to the emulsion below 40 degrees C, continue mixing until homogenous.

Description

An oil-in-water emulsion system mascara, that lengthens, defines and creates the appearance of multiplied lashes. BEUB-ASGP6, Ultramarine Blue and BTD-ASGP3, Titanium Dioxide with hydrophobic and superdispersible surface treatment, gives the characteristic electric blue colour. Cellulose based biodegradable RAYON FIBER 3.3T-0.8MM(S) adds length and volume to lashes. MSS-500/3N, silica microsphere with average particle size 3 microns imparts increased payoff and enhanced slip without affecting viscosity. KOBOGUARD® 50AMP-G is a strong and flexible film former that contributes to the lash building effect and adds water resistance.



KMA-102C-BR

Clean Lash Lengthening Mascara

Part 1

• KOBOGUARD® NATURAL 3000-NDA70 - Kobo Products: <i>Glyceryl Hydrogenated Rosinate (And) C9-12 Alkane</i>	10.71%
• Cetiol® Ultimate - BASF: <i>Undecane (and) Tridecane</i>	6.29%
• Candelila Wax - Fenix Ceras: <i>Candelilla (Euphorbia Cerifera) Wax</i>	5.50%
• MONTANOV™ 202 - Seppic: <i>Arachidyl Alcohol (and) Behenyl Alcohol (and) Arachidyl Glucoside</i>	5.00%
• Carnauba Wax - Fenix Ceras: <i>Carnauba Wax</i>	3.50%
• Glyceryl Stearate - Engenharia das Essências: <i>Glyceryl Stearate</i>	2.00%
• COSMOL™ 182V - Ikeda/ Kobo Products: <i>Sorbitan Sesquiosostearate</i>	1.20%
• Lexgard® Natural MB - Inolex: <i>Glyceryl Caprylate (and) Glyceryl Undecylenate</i>	1.00%

Part 2

• Deionized Water - Water	28.60%
• Glycerin - Synth: <i>Glycerin</i>	2.00%
• SOLAGUM™ AX - Seppic: <i>Acacia Senegal Gum (and) Xanthan Gum</i>	1.00%
• SOLAGUM™ TARA - SEPPIC: <i>Caesalpinia Spinosa Gum</i>	0.20%

Part 3

• CELL-U-LASH™ 150 - Kobo Products: <i>Cellulose</i>	1.00%
• CELL-U-LASH™ 40 - Kobo Products: <i>Cellulose</i>	1.00%
• MSS-500/N - Kobo Products: <i>Silica</i>	1.00%

Part 4

• KOBOGUARD® NATURAL PXF - Kobo Products: <i>Water (And) Pullulan (And) Glycerin (And) Cellulose (And) Xanthan Gum (And) Methylglucamine</i>	20.00%
• W25CB - Kobo Products: <i>Water (And) Black 2 (And) Sodium Lignosulfonate</i>	10.00%

Manufacturing Procedure

1. Combine phase 1 and heat until 80°C.
2. Mix phase 2 and heat until 80°C .
3. Add phase 1 to phase 2 while mixing.
4. Cool until 45°C and add phase 3.
5. Add phase 4 and mix until homegeneous.

Description

This mascara has mostly natural origin ingredients that, when combined, adhere perfectly to the lashes, creating a multidimensional texture that lengthens and adds volume. It features CELL-U-LASH™ 150 and CELL-U-LASH™ 40 fibers, made of cellulose, a natural polymer, to lengthen lashes and visually improve the curling angle. MSS-500/N, a silica microsphere, provides volume and adherence to the lashes. Two film formers, KOBOGUARD® NATURAL 3000-NDA70 (oil phase) and KOBOGUARD® NATURAL PXF (water phase) are combined to add long wear and prevention from smudging, racoon eyes and flaking. Carbon black dispersion W25CB provides the deep black color and is easy to add into the formula. COSMOL™ 182V contributes to formula stability.

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