

Surface Treated *Microspheres*



Microspheres are micron-sized spherical particles used in formulas for their ability to scatter light to diminish the look of fine lines on the skin, an effect also known as "optical blurring" or "soft focus".

They also provide a ball-bearing effect, which will impart finished products with increased payoff, an elegant silky texture, enhanced slip and better blendability for a more natural finish.

Microspheres are also available with surface treatments, which help when adding them to oil phases in formulas and enhance skin feel, adhesion and blendability. Fluorinated treatments render Microspheres both hydrophobic and lipophobic, making them excellent choices for long-wear products due to their resilience to perspiration and sebum.

	Trade Name	INCI Name	Treatment Type	Size (µm)	Oil Abs (g/100g)	Bulk Density (g/in ³)
Mineral Microspheres	SILICA SHELLS-SH	<i>Silica (And) Methoxy Amodimethicone/Silsesquioxane Copolymer</i>	Silicone	3	475	0.7
	MSS-500N-FS	<i>Silica (And) Perfluorohexylethyl Triethoxysilane</i>	Fluorinated	8	24	13.5
	New MSS-500W-LL10	<i>Silica (And) Lauroyl Lysine</i>	Hydrophobic	12.5	101	5.7
	FLORITE PS-MNS8	<i>Calcium Silicate (And) Methoxy Amodimethicone/Silsesquioxane Copolymer (And) Hydrogen Dimethicone</i>	Silicone	11	330	1.7
Natural Polymer Microspheres	CELLULOBEADS D-5-NPC2	<i>Cellulose (And) Hydrogenated Lecithin</i>	Natural	10	35	6.4
	CELLULOBEADS D-5-ASG3	<i>Cellulose (And) Stearoyl Glutamic Acid</i>	Natural	13	36	8.1
	CELLULOBEADS D-10-NJE2	<i>Cellulose (And) Jojoba Esters</i>	Natural	13	36	7.7
	CELLULOBEADS D-10-NPC2	<i>Cellulose (And) Hydrogenated Lecithin</i>	Natural	13	36	7.7
	CELLULOBEADS D-10-I3	<i>Cellulose (And) Isopropyl Titanium Triisostearate</i>	Lipophilic	16	34	4.4
Polymer Microspheres	MST-547-FS	<i>Polymethylsilsesquioxane (And) Perfluorohexylethyl Triethoxysilane</i>	Fluorinated	4	47	6.3
	Nylon 10-I2	<i>Nylon-12 (And) Isopropyl Titanium Triisostearate</i>	Lipophilic	8	56	3.5
	SP-10-FS	<i>Nylon-12 (And) Perfluorohexylethyl Triethoxysilane</i>	Fluorinated	9	60	4.4

This chart was prepared to assist in formulating with Surface Treated Microspheres. The information contained herein is believed to be accurate at the time of printing, but should not be used as a substitute for product specification sheets.



KBL-036

3-in-1 Blush, Lipstick, Eyeshadow

Part 1

● Permethyl® 99A - Presperse: <i>Isododecane</i>	27.50%
● KOBOGUARD® 5400 IDD - Kobo Products: <i>Hydrogenated Polycyclopentadiene (And) Isododecane</i>	25.00%
● KOBOGUARD® HRPC - Kobo Products: <i>Hydrogenated Polycyclopentadiene (And) Polyethylene (And) Copernicia Cerifera (Carnauba) Wax (And) Tocopherol</i>	10.00%
● Candelilla Wax - SP-75 - Strahl & Pitsch: <i>Euphorbia Cerifera (Candelilla) Wax</i>	7.00%
● MAKIGREEN VELVET WAX - Daito/Kobo Products: <i>Vegetable Oil (Olus Oil) (And) Oryza Sativa (Rice) Bran Oil (And) Oryza Sativa (Rice) Bran Wax (And) Rhus Succedanea Fruit Wax (And) Helianthus Annuus (Sunflower) Seed Wax</i>	5.00%
● CARNAUBA WAX SP 63P - Strahl & Pitsch: <i>Copernicia Cerifera (Carnauba) Wax</i>	5.00%

Part 2

● PMLVP75R - Kobo Products: <i>Iron Oxides (CI 77491) (And) Isododecane (And) Isohexadecane (And) Lecithin (And) Polyhydroxystearic Acid (And) Ethylene/Propylene/Styrene Copolymer (And) Butylene/Ethylene/Styrene Copolymer (And) Isopropyl Titanium Triisostearate</i>	2.00%
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Part 3

● CARESS® BN09 - Kobo Products: <i>Boron Nitride</i>	8.00%
● MSS-500W-LL10 - Kobo Products: <i>Silica (And) Lauroyl Lysine</i>	5.00%
● MSS-500/3H - Kobo Products: <i>Silica</i>	3.00%
● KTZ® BLUE CLARET - Kobo Products: <i>Mica (And) Iron Oxides (CI 77491)</i>	2.00%

Part 4

● Lexgard® Natural MB - Inolex: <i>Glyceryl Caprylate (And) Glyceryl Undecylate</i>	0.50%
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Manufacturing Procedure

1. Combine Part 1 and heat to 80°C. Propeller mix until clear and homogeneous.
2. Add Part 2. Continue mixing.
3. Sprinkle in Part 3 to the batch. Mix until homogenous.
4. Add Part 4. Mix well.
5. Pour into components at 80°C.

Description

This multipurpose color stick will make your life easier by using it as the only tool to enhance your cheeks, lips, and eyes. This product features KOBOGUARD® 5400 IDD that provides the long wear properties of the formula. KOBOGUARD® HRPC, a wax-resin composite, imparts enhanced adhesion. MAKIGREEN VELVET WAX gives body to the formula and gives a matte appearance on skin. The redwood shade of the product is achieved by a combination of PMLVP75R and KTZ® BLUE CLARET. CARESS® BN09 provides spreadability, long lasting effect and good coverage. The combination of MSS-500/3H and MSS-500W-LL10 enables the stick to be structured with less wax and improves the application and after feel while providing soft focus.



KSL-475E-EU

Clean Beauty Sunscreen Stick 3-in-1 Prime'n Glow Non-Nano ZnO



Part 1

● Dub Zenoat - Stearinerie Dubois: <i>Propanediol Dicaprylate</i>	28.10%
● ZnO-C-ASG3J - Kobo Products: <i>Zinc Oxide (And) Stearoyl Glutamic Acid</i>	25.00%
● Emotion Light - Roelmi HPC: <i>Tripelargonin Butylene/Ethylene/Styrene Copolymer</i>	18.69%
● SunBoost ATB - Kobo Products: <i>Argania Spinosa Kernel Oil (And) Tocopheryl Acetate (And) Bisabolol</i>	4.00%
● Plurol Diisostearique - Gattefosse: <i>Polyglyceryl-3 Diisostearate</i>	2.00%
● Sensiva PA 40 - Schuelke: <i>Phenylpropanol (And) Propanediol (And) Caprylyl Glycol (And) Tocopherol</i>	0.60%

Part 2

● Sunflower Wax - Koster Keunen: <i>Helianthus Annuus Seed Wax</i>	3.80%
● Dub PTB - Stearinerie Dubois: <i>Pentaerythrityl Tetrabenenate</i>	3.00%
● Kesterwax K82H - Koster Keunen: <i>C20-40 Alkyl Stearate</i>	2.00%

Part 3

● CELLULOBEADS D-10-NPC2 - Kobo Products: <i>Cellulose (And) Hydrogenated Lecithin</i>	5.00%
● MSS-500/N - Kobo Products: <i>Silica</i>	5.00%
● MSS-500/3H - Kobo Products: <i>Silica</i>	1.20%

Part 4

● KTZ® ARUBAN CORAL-ASG2 - Kobo Products: <i>Mica (And) Titanium Dioxide (And) Iron Oxides (CI 77491) (And) Stearoyl Glutamic Acid</i>	1.00%
● GCG50TRSG - Kobo Products: <i>Iron Oxides (CI 77491) (And) Caprylic/Capric Triglyceride (And) Polyglyceryl-3 Diisostearate (And) Stearoyl Glutamic Acid</i>	0.40%

● GCG50TYSG - Kobo Products: <i>Iron Oxides (CI 77492) (And) Caprylic/Capric Triglyceride (And) Polyglyceryl-3 Diisostearate (And) Stearoyl Glutamic Acid</i>	0.15%
● KTZ® EBONY - Kobo Products: <i>Iron Oxides (CI 77499) (And) Mica</i>	0.06%

Manufacturing Procedure

1. Prepare Part 1 by dispersing powder ZnO in liquid emollients.
2. Add Part 2, heat to 95°C, add Part 3 followed by Part 4 and mix till homogeneous.
3. Pour into containers at 85°C and leave to cool at RT.

Description

This easy-to-use, waterless 3-in-1 sunscreen stick is also a primer with a glow effect, containing mostly vegetal and mineral origin ingredients. The formulation contains ZnO-C-ASG3J, a non-nano Zinc Oxide, hydrophobically modified for easy dispersion in the emollients used, to provide UV protection. It also contains SunBoost ATB for UV protection boosting and skin protecting efficacy. The mineral microspheres MSS-500/N and MSS-500/3H contribute to weightless application and good payoff as well as soft focus effects on the skin. CELLULOBEADS D-10-NPC2, a 10 micron cellulose microsphere with hydrogenated lecithin treatment, which renders it more creamy, contributes softness and creaminess to the stick. The formulation is tinted with GCG50TRSG and GCG50TYSG, transparent iron oxide dispersions and KTZ® EBONY, a black iron oxide coated mica, to significantly reduce whitening caused by large particle size Zinc Oxide. The glow effect is imparted by KTZ® ARUBAN CORAL-ASG2, a special skin color blend.

Active Ingredients

Zinc Oxide	24.25%
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Testing

SPF: in vivo on 5 subjects
UVA-PF: in vitro method
CW: FDA method

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Technical Interview Questions - February 23, 2022

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