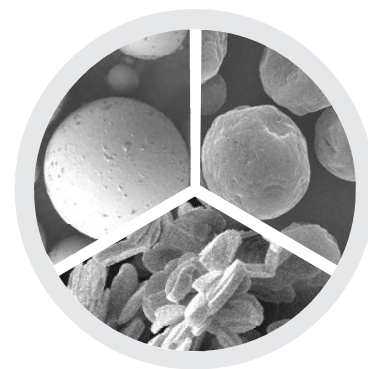


Kobo SMC

Polymer Microsphere Replacements



Microspheres are very popular for their ability to impart finished products with elegant silky textures, enhanced slip or ball bearing effect, improved blendability on the skin, a natural finish and increased payoff. Microspheres are also able to scatter light to diminish the look of fine lines on the skin, while letting enough light through so the look of the skin is even, an effect known as Soft Focus or Optical Blurring. Many commonly-used microspheres are made of polymers such as PMMA, Polyethylene, Polyurethane or Silicone Resins.

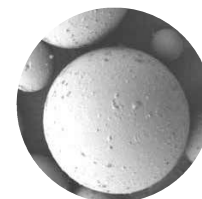
However, emerging regulations on microplastics and the recent “Clean” chemistry formulation trend are pushing formulators to replace them with products of similar effects.

Natural, non-plastic silica microspheres have been commercially available for many years but direct replacement of these for microplastics is complicated because of differences in physical structure and their hardness and compressibility in finished products.

Kobo has developed a series of texture-enhancing products called **Kobo SMC**, using no plastic particles, that imparts similar properties in a wide range of finished products. These high quality complexes offer stability, texture, cushion, and the ability to formulate lipsticks, foundations, skin care, sun products, mascaras, eyeliners, blushers, bronzers and primers that feel the same throughout wear and temperature changes, due to an optimized ratio of each material in the blend. In addition to these new Solid Complexes, Kobo offers **Silica Microspheres** and **Boron Nitride** that provide numerous benefits in formulations of all kinds.



CARESS® BN09



MSS-500/N

Trade Name	INCI Name	Particle Size (µm)	Oil Abs* (g/100g)	Density (g/in ³)	Designed to replace:	Replacement Ratio
New Kobo SMC-BNCW	Boron Nitride (And) Cellulose	8	78	2.5	PMSQ - 2 to 5 µm	1:1
MSS-500/N	Silica	11.5	38	6.7	PMSQ - 10 µm	1:1.3
New Kobo SMC-BNS9	Silica (And) Boron Nitride	10	61	5.2	MMA Crosspolymer - 5 to 10 µm	1:1
New Kobo SMC-BNC9	Boron Nitride (And) Cellulose	14	115	2.2	PMMA - 5 to 8 µm	1:1
CARESS® BN09	Boron Nitride	9	101	2.9	PMMA - 10+ µm	1:0.6
New Kobo SMC-BNCS6	Silica (And) Boron Nitride (And) Cellulose	11	62	6.6	Soft Beads (PU, PE, ...) 5 to 12 µm	1:1.4
New Kobo SMC-BNS6	Silica (And) Boron Nitride	10	60	6.6	Soft Beads (PU, PE, ...) 15+ µm	1:1
New ASO-NJE2	Aluminum Starch Octenylsuccinate (And) Jojoba Esters	14	38	6.7	Nylon-12 - 5 to 10 µm	3:5

* Oil Abs: ASTM, D281-84

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

PMSQ = Polymethylsilsesquioxane; MMA Crosspolymer = Methyl Methacrylate Crosspolymer; PMMA = Polymethyl Methacrylate; PU = Polyurethane; PE = Polyethylene

KOBO

USA - New Jersey
+1 (908) 757-0033

BRASIL - São Paulo
+55 (11) 5062-0634

UK - Abingdon
+44 7913 636 673

FRANCE - Labege
+33 (0)5-62-88-77-40



KPP-129

Pressed Powder with Kobo SMC-BNCS6

Part 1

● SERICITE GMS-4C - Kobo Products: <i>Mica</i>	60.40%
● Kobo SMC-BNCS6 - Kobo Products: <i>Silica (And) Boron Nitride (And) Cellulose</i>	14.00%
● BTD-11S2 - Kobo Products: <i>Titanium Dioxide (And) Triethoxycaprylylsilane</i>	7.00%
● ZINC MYRISTATE - Kobo Products: <i>Zinc Myristate</i>	2.00%
● BYO-11S2 - Kobo Products: <i>Iron Oxides (CI 77492) (And) Triethoxycaprylylsilane</i>	1.00%
● BRO-11S2 - Kobo Products: <i>Iron Oxides (CI 77491) (And) Triethoxycaprylylsilane</i>	0.85%
● BBO-11S2 - Kobo Products: <i>Iron Oxides (CI 77499) (And) Triethoxycaprylylsilane</i>	0.45%
● Lexgard® O - Inolex: <i>Caprylyl Glycol</i>	0.30%

Part 2

● Neosolue™-DiSM - Nippon/Kobo Products: <i>Diisostearyl Malate</i>	9.25%
● Plandool™-G - Nippon/Kobo Products: <i>Bis-Behenyl/Isostearyl/Phytosteryl Dimer Dilinoleyl Dimer Dilinoleate</i>	4.20%
● SALACOS® HS-6C - Ikeda: <i>Polyhydroxystearic Acid</i>	0.55%

Manufacturing Procedure

1. Combine Part 1. Micropulverize until color is fully developed.
2. Combine Part 2. Slowly add to Part 1. Micropulverize until uniform.
3. Press at 300psi.

Description

This powder features **Kobo SMC-BNCS6** for superior softness and tactility, superb spreadability, excellent adherence, long-lasting effect, good coverage, slip and a great creamy feel. Neosolue™-DiSM gives moisturizing properties and glide upon application. Plandool™-G helps with moisture retention and improvement of skin barrier functions. SERICITE GMS-4C gives a glide-on application. The 11S Silane-Treated Pigments disperse easily, adhere to the skin, and resist darkening during wear. ZINC MYRISTATE also contributes to great feel and adherence on the skin.



KLG-098

Lip Gloss with Kobo SMC-BNCW

Part 1

● CO15M5 - Kobo Products: <i>Ricinus Communis (Castor) Seed Oil (And) Silica</i>	30.00%
● Protachem™ CTG - Protameen: <i>Caprylic/Capric Triglyceride</i>	24.00%
● OD75RJE - Kobo Products: <i>Iron Oxides (CI 77491) (And) Octyldodecanol (And) Jojoba Esters (And) Trihydroxystearin</i>	10.00%
● OD55YJE - Kobo Products: <i>Iron Oxides (CI 77492) (And) Octyldodecanol (And) Jojoba Esters (And) Trihydroxystearin</i>	5.00%
● Lexgard® Natural - Inolex: <i>Glyceryl Caprylate (And) Glyceryl Undecylenate</i>	1.00%
● SunBoost ATB Natural - Kobo Products: <i>Argania Spinosa Kernel Oil (And) Tocopheryl Acetate (And) Bisabolol</i>	1.00%

Part 2

● Beeswax White Sp 422P - Strahl & Pitch: <i>Beeswax</i>	3.00%
● Plandool™-LG1 - Nippon/Kobo Products: <i>Phytosteryl/Behenyl/Octyldodecyl Lauroyl Glutamate</i>	1.00%

Part 3

● Neosolue™-DiSM - Nippon/Kobo Products: <i>Diisostearyl Malate</i>	14.50%
● Kobo SMC-BNCW - Kobo Products: <i>Boron Nitride (And) Cellulose</i>	10.00%
● SALACOS® HS-6C - Ikeda: <i>Polyhydroxystearic Acid</i>	0.50%

Manufacturing Procedure

1. Combine Part 1 and prop mix until the color is uniform.
2. Begin heating Part 1 to 85° C and add Part 2. Continue mixing until waxes are completely melted.
3. Start cooling batch to 60° C.
4. Combine Part 3 under propeller mixer while heating to 60° C.
5. Add Part 3 to batch. Continue mixing until uniform. Pour into lip gloss components while still warm.

Description

This glossy, emollient lip gloss provides a substantive, cushiony film to the lips. It features **Kobo SMC-BNCW** for superior softness and tactility, superb spreadability, excellent adherence, long-lasting effect, good coverage, slip and a great creamy feel. Neosolue™-DiSM gives moisturizing properties and glide upon application. OD Pigmentary Dispersions create the rich red shade. CO15M5 gives superior gloss and increased wear. Plandool™-LG1, a high melt point waxy material, works together with SunBoost ATB Natural by incorporating emolliency while moisturizing and hydrating the lips.