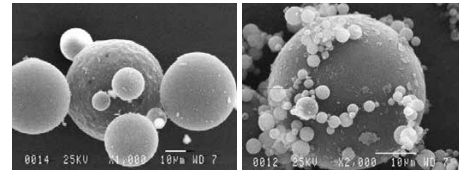


Microspheres & Surface Treated Microspheres

Europe Program



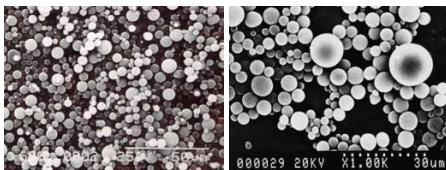
Microspheres are discrete spherical particles ranging in average particle size from 1 to 30 microns. Because of their size and shape, Microspheres are able to **scatter light** to diminish the look of fine lines on the skin. This effect is also known as “optical blurring” or “soft focus”. In addition, Microspheres offer a **ball-bearing effect** which will impart finished products with an elegant silky texture, increased payoff, and enhanced slip. This ball-bearing effect promotes better blendability on the skin and a more natural finish. Some microspheres also act as **carriers for oils** and can be used for **sebum control**.



DSPCS/20N-I2

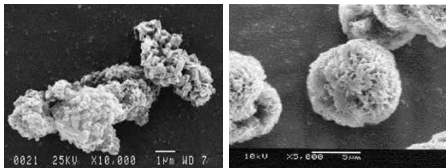
DSPCS/3H-I2

Microsphere Complexes are produced using Kobo’s patented technology, Isopropyl Titanium Triisostearate treatment, that covalently bonds two unlike materials, at least one of which being a spherical particle, to yield a complex that has the best **balance of properties** possible. They offer all the benefits of microspheres while bringing a lightweight feel to many other product forms.



MSP-822

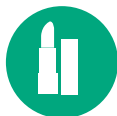
EA-209



SILICA SHELLS

TR-1

Since they can be used in all product forms (powders, anhydrous hot pours, emulsions, etc ...), microspheres and microsphere complexes, whether used individually or in combination, have become indispensable to formulation of state-of-the-art cosmetic products.



KLP-162

High Coverage, Semi-Matte Lipstick

Part 1

- INBP45R7C - Kobo Products: Red 7 Lake (And) Isononyl Isononanoate (And) Isopropyl Myristate (And) Stearalkonium Hectorite (And) Isopropyl Titanium Triisostearate (And) Propylene Carbonate (And) Polyhydroxystearic Acid 14.00%
- COSMOL™ 222 - Ikeda Corporation: Diisostearyl Malate 13.20%
- COSMOL™ 168ARV - Ikeda Corporation: Dipentaerythryl Hexahydroxystearate/Hexastearate/Hexarosinate 10.52%
- COSMOL™ 43V - Ikeda Corporation: Polyglyceryl-2 Triisostearate 10.00%
- KOBOGUARD® 5400 CCT - Kobo Products: Hydrogenated Polycyclopentadiene (And) Caprylic/Capric Triglyceride 10.00%
- CPF-3300@10cSt - Avantor/Kobo Products: Phenyl Trimethicone 7.98%
- INBP70U - Kobo Products: Titanium Dioxide (And) Isononyl Isononanoate (And) Isopropyl Myristate (And) Stearalkonium Hectorite (And) Isopropyl Titanium Triisostearate (And) Propylene Carbonate (And) Polyhydroxystearic Acid 7.00%
- Ozokerite Wax White SP 1020P - Strahl & Pitsch: Ozokerite 6.00%
- PM WAX 82 - Toray/Kobo Products: Polyethylene (And) Microcrystalline Wax 4.90%

- INBP55EY - Kobo Products: Iron Oxides (CI 77492) (And) Isononyl Isononanoate (And) Isopropyl Myristate (And) Stearalkonium Hectorite (And) Polyhydroxystearic Acid (And) Isopropyl Titanium Triisostearate (And) Propylene Carbonate 4.40%
- CARESS® BN30 - Bent Tree/Kobo Products: Boron Nitride 4.00%
- SALACOS® 334 - Ikeda Corporation: Caprylic/Capric/Myristic/Stearic Triglyceride 2.00%

Part 2

- MSS-500/3H - Kobo Products: Silica 4.00%
- SILICA SHELLS - Kobo Products: Silica 2.00%

Manufacturing Procedure

1. Combine Part 1 and heat to 85°C.
2. Slowly add Part 2 and mix until homogeneous.
3. Pour at 85°C (ensure lipstick mold is not cold).

Description

This high coverage, semi-matte lipstick features a combination of Kobo’s high oil absorption microspheres, SILICA SHELLS and MSS-500/3H, which offer a background matte effect with increased payoff and a smooth application. CARESS® BN30 is a boron nitride that improves wear and gives a velvet finish. Kobo’s INBP Pigmentary Dispersions ease the manufacturing process and give a more intense, uniformly developed color. CPF-3300@10cSt is a low viscosity phenyl trimethicone that improves feel and application. PM WAX 82 contributes to the structure of the formula. KOBOGUARD® 5400 CCT is a film former that helps with long wear.

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	Trade Name	INCI Name	Size (µm)	Oil Abs* (g/100g)	Refract Index	Bulk Density (g/in ³)
Polymer Microspheres	MST-203	Polymethylsilsesquioxane	2	50	1.41	6.5
	MST-547		4.5	54	1.41	7.0
	DIASPHERE® KS-500		5	96	1.41	7.0
	DIASPHERE® KS-1000		10	50	1.41	5.0
	New SESQ-ML5		6	50	1.42	8.8
	New SESQ-White1	Polymethylsilsesquioxane (And) Polyphenylsilsesquioxane	8	34	1.49	7.1
	MSP-930	Methyl Methacrylate Crosspolymer	7	59	1.49	6.4
	MSP-825	Polymethyl Methacrylate	8	57	1.49	6.7
	MSP-822		9	48	1.49	5.3
	SPHERICAL THERMOPLASTIC POWDER SE-3107A**		Ethylene/Methacrylate Copolymer	12	62	1.49
	EA-209**	Ethylene/Acrylic Acid Copolymer	10	60	1.51	2.6
	CL-2080**	Polyethylene	11	60	1.51	4.0
	BPD-500W	HDI/Trimethylol Hexyllactone Crosspolymer (And) Silica	11	60	1.52	8.2
	TR-1	Nylon-6	13	112	1.53	4.0
	TR-2		20	141	1.53	3.5
SP-500	Nylon-12	5	60	1.53	4.7	
SP-10		10	60	1.53	6.2	
Mineral Microspheres	MSS-500/3	Silica	3	135	1.47	3.5
	MSS-500/3H		3	300	1.47	1.3
	MSS-500/3N		5.5	33	1.47	6.1
	MSS-500		12	133	1.47	5.8
	MSS-500W+		12	119	1.47	6.2
	MSS-500/H		12	300	1.47	3.1
	MSS-500/N		11.5	38	1.47	6.7
	MSS-500/20N		20	40	1.47	12.9
	SILICA SHELLS		3	490	1.47	0.8
	FLORITE PS-10	Calcium Silicate	10	434	1.63	1.1
FLORITE R	29		650	1.63	1.2	
Surface-Treated Microspheres	MST-547-FS	Polymethylsilsesquioxane (And) Perfluorooctyl Triethoxysilane	4	47	-	6.3
	MSS-500-NS5	Silica (And) Methoxy Amodimethicone/Silsesquioxane Copolymer	14	105	-	8.5
	MSS-500N-FS	Silica (And) Perfluorooctyl Triethoxysilane	8	24	-	14.4
	SILICA SHELLS-SH	Silica (And) Methoxy Amodimethicone/Silsesquioxane Copolymer	3	475	-	0.7
	CELLULOBEADS D-10-PC2**	Cellulose (And) Hydrogenated Lecithin	11	35	-	5.1
	BPA-515	Polymethyl Methacrylate (And) Isopropyl Titanium Triisostearate	9	50	-	3.8
	Nylon 10-12	Nylon-12 (And) Isopropyl Titanium Triisostearate	8	56	-	3.5
	SP-10-FS	Nylon-12 (And) Perfluorooctyl Triethoxysilane	9	60	-	4.4
Spherical Elastomers New	MST-E8	Vinyl Dimethicone/Methicone Silsesquioxane Crosspolymer	8	77	-	4.1

** Natural Treatment

* Oil Abs: ASTM, D281-84

** EA-209 & CL-2080 are heat sensitive and will gel if heated above 70°C. SE-3107A have a softening point of 80°C and should not be added under this temperature

This chart was prepared to assist in formulating with Microspheres and Microsphere Complexes. 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.



+ Raw material approved by Ecocert in accordance with the Cosmos and Ecocert Standards