Microspheres

Microspheres are discrete spherical particles ranging in average particle size from 1 to 40 microns.

Because of their size and shape, 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.

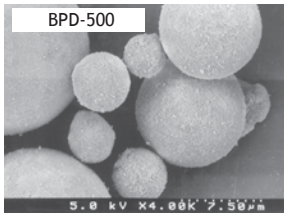
Microspheres are also able to **scatter light** to diminish the look of fine lines on the skin, while letting enough light through so the look of the skin is natural. This phenomenon is known as "Soft Focus Effect" or "Optical Blurring."

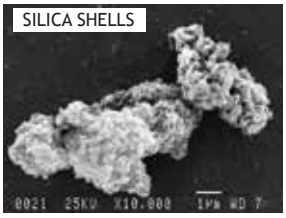
Some Microspheres are porous and have a high oil absorption capacity: they can act as **carriers** to absorb and deliver materials, and can be used for **sebum control**.

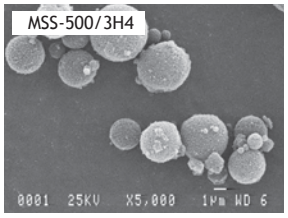
A special use of Microspheres is in mascaras. The non-absorbent grades of silicas of different diameters have a **volumizing effect**, with minimum absorbency.

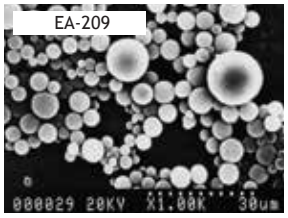
CELLULOBEADS are hydrophilic Microspheres made of cellulose which have a high capacity to absorb moisture. They are also available colored with inorganic colorants.

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









Pressed Powder with POMP900

KPP-069G

Part 1

- SERICITE GMS-4C - Kobo Products: *Mica* 70.48%
- POMP900 - Toabo/Kobo Products: *Nylon-6* 10.00%
- BTD-11S2 - Kobo Products: *Titanium Dioxide (And) Triethoxycaprylylsilane* 7.00%
- ZINC MYRISTATE - Kobo Products: *Zinc Myristate* 2.00%
- BYO-11S2 - Kobo Products: *Iron Oxides (C.I. 77492) (And) Triethoxycaprylylsilane* 1.00%
- BRO-11S2 - Kobo Products: *Iron Oxides (C.I. 77491) (And) Triethoxycaprylylsilane* 0.86%
- BBO-11S2 - Kobo Products: *Iron Oxides (C.I. 77499) (And) Triethoxycaprylylsilane* 0.46%
- Methyl Paraben NF - International Sourcing: *Methylparaben* 0.10%
- Propyl Paraben NF - International Sourcing: *Propylparaben* 0.10%

Part 2

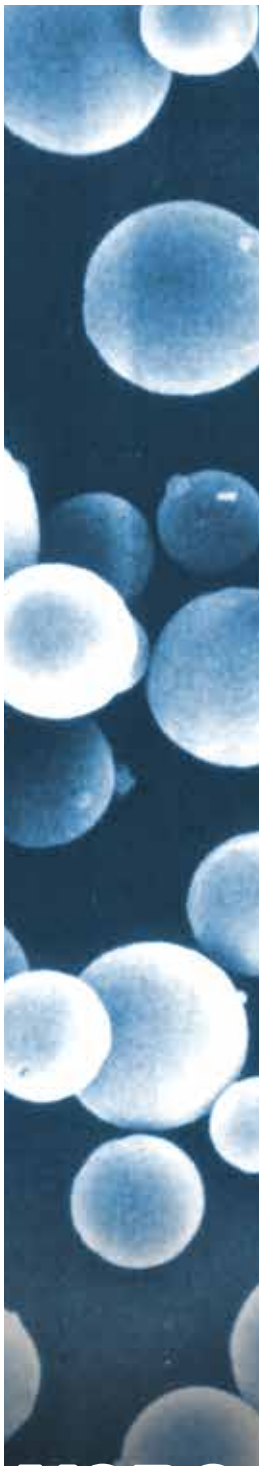
- CSF-3100@20cSt - NuSil/Kobo Products: *Dimethicone* 2.50%
- Lexol® PG-865 - Inolex Chemical Company: *Propylene Glycol Dicaprylate/Dicaprate* 2.50%
- CSF-3100@350cSt - NuSil/Kobo Products: *Dimethicone* 2.00%
- SS4267 - Momentive: *Dimethicone (And) Trimethylsiloxysilicate* 1.00%

Manufacturing Procedure

1. Micropulverize Part 1 until color is fully developed.
2. Add Part 2 to Part 1.
3. Blend well.
4. Press at 700 psi.

Description

Part of a formula series that shows how important Microspheres are to pressed powder formulas. Each type and size of Microsphere gives the formula a different feel. This pressed powder formula contains POMP900, a porous Nylon-6, that has a unique non-spherical dumbbell shape that scatters and diffuses light to cause soft focus effect. The light scattering properties help to diminish the look of fine lines on the skin, while letting enough light through so the look of the skin is natural. SERICITE GMS-4C is added to give a glide-on application. Kobo's 11S treatment helps to provide this pressed powder with adhesion to the skin and gives the formula a creamy feel. ZINC MYRISTATE also contributes to great feel and adherence on the skin. Caresil Pure Fluids, high clarity-purity silicones, CSF-3100@20cSt and 350cSt, deliver an emollient, silky feel with reduced tackiness that brings about high spreadability and compatibility.



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Microspheres

	Trade Name	INCI Name	Size (µm)	Oil Abs* (g/100g)	Refract Index	Bulk Density (g/in³)
Polymer Microspheres	EA-209**	Ethylene/Acrylic Acid Copolymer	10	60	1.51	2.6
	SPHERICAL THERMOPLASTIC POWDER SE-3107A**	Ethylene/Methacrylate Copolymer	12	62	1.49	3.1
	BPD-800	HDI/Trimethylol Hexyllactone Crosspolymer (And) Silica	7	63	1.52	6.4
	BPD-500	HDI/Trimethylol Hexyllactone Crosspolymer (And) Silica	15	65	1.52	9.5
	BPD-500T	HDI/PPG/Polycaprolactone Crosspolymer (And) Silica	13.5	58	1.52	8.2
	BPA-500	Polymethyl Methacrylate	10	55	1.49	5.2
	MSP-822	Polymethyl Methacrylate	9	48	1.49	5.3
	BPA-500X	Methyl Methacrylate Crosspolymer	7	58	1.49	6.7
	MSP-930	Methyl Methacrylate Crosspolymer	7	59	1.49	6.4
	MSP-825	Methyl Methacrylate Crosspolymer	8	57	1.49	6.7
	TR-1	Nylon-6	13	112	1.53	4.0
	TR-2	Nylon-6	20	141	1.53	3.5
	New POMP900	Nylon-6	9	172	1.53	2.9
	SP-10	Nylon-12	10	60	1.53	6.2
	SP-500	Nylon-12	5	60	1.53	4.7
	CL-2080**	Polyethylene	11	60	1.51	4.0
	DIASPHERE® KS-500	Polymethylsilsesquioxane	5	96	1.46	7.0
	DIASPHERE® KS-1000	Polymethylsilsesquioxane	10	50	1.41	5.0
	MST-203	Polymethylsilsesquioxane	2	50	1.41	6.5
	MST-547	Polymethylsilsesquioxane	4.5	54	1.41	7.0
	New SESQ-ML5	Polymethylsilsesquioxane	6	50	1.42	8.8
	New SESQ-MH5	Polymethylsilsesquioxane (And) Silica	6	66	1.42	8.4
	New SESQ-White1	Polymethylsilsesquioxane (And) Polyphenylsilsesquioxane	8	34	1.49	7.1
	New SESQ-CL3	Zea Mays (Corn) Starch (And) Polymethylsilsesquioxane (And) Polypropylsilsesquioxane (And) Aminopropyl Dimethicone	14	51	1.49	6.4
	New SESQ-CH1	Zea Mays (Corn) Starch (And) Silica (And) Aminopropyl Dimethicone	9	42	1.49	9.6
Silica Microspheres	MSS-500	Silica	12	133	1.47	5.8
	MSS-500W+	Silica	12	119	1.47	6.2
	MSS-500/N*	Silica	11.5	38	1.47	6.7
	MSS-500/7N	Silica	7.5	50	1.47	7.5
	MSS-500/H	Silica	12	300	1.47	3.1
	MSS-500/3	Silica	3	135	1.47	3.5
	MSS-500/3N	Silica	5.5	33	1.47	6.1
	MSS-500/3H*	Silica	3	300	1.47	1.3
	MSS-500/3H4	Silica	2.5	318	1.47	1.2
	MSS-500/20N	Silica	20	40	1.47	12.9
	SILICA SHELLS*	Silica	3	-	1.47	0.8
Natural Microspheres	CELLULOBEADS D-5	Cellulose	5	70	1.49	9.7
	CELLULOBEADS D-10+	Cellulose	10	60	1.49	11.6
	CELLULOBEADS D-30	Cellulose	30	60	1.49	13.3
	CELLULOBEADS D-50	Cellulose	40	56	1.49	14.9
	CELLULOBEADS USF+	Cellulose	5.5	184	1.49	2.7
	CELLULOBEADS D-10(R-33P)	Cellulose (And) Iron Oxides (C.I. 77491)	10	48	-	9.9
	CELLULOBEADS D-10(Y-33P)	Cellulose (And) Iron Oxides (C.I. 77492)	10	42	-	10.3
	CELLULOBEADS D-10(UB-33)	Cellulose (And) Iron Oxides (C.I. 77499) (And) Silica	10	51	-	10.8
	CELLULOBEADS D-10(Ti-33)	Cellulose (And) Titanium Dioxide (And) Aluminum Hydroxide	10	41	-	10.4
	FLORITE R	Calcium Silicate	29	650	1.63	1.2
	New FLORITE PS-10	Calcium Silicate	10	434	1.63	1.1
	New MAKIBEADS ECO D-1	Polylactic Acid (And) Polyglyceryl-5 Laurate	4	96	1.46	1.6
	New MAKIBEADS ECO D-5*	Polylactic Acid	12	54	1.46	3.2

Approved by ECOCERT RAW MATERIAL COSMETICS

** Raw material approved by Ecocert in accordance with the Ecocert Standard*

Approved by ECOCERT RAW MATERIAL COSMOS APPROVED

+ Raw material approved by Ecocert in accordance with the Cosmos Standard

** 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 be added under this temperature.*

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

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