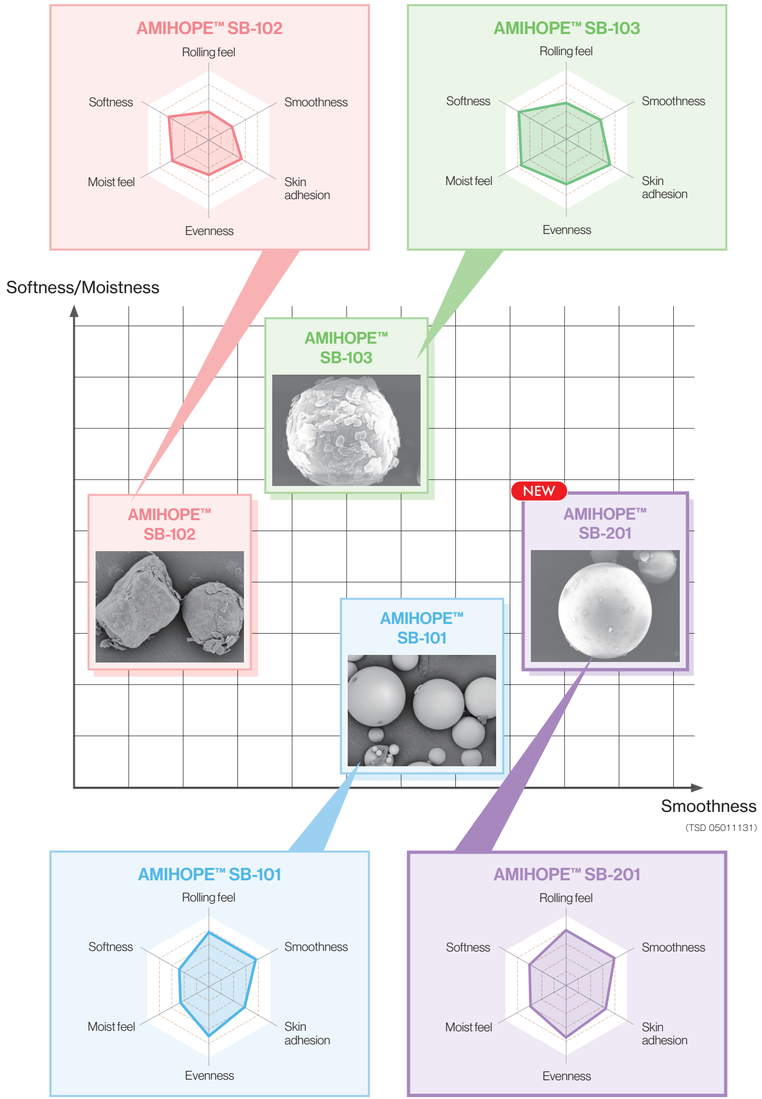
Sensory mapping of AMIHOPE™ SB series



Summary of Physicochemical Property

Basic Information	AMIHOPE™ SB-101	AMIHOPE™ SB-102	AMIHOPE™ SB-103	AMIHOPE™ SB-201
Oil absorption*1	80 g / 100 g	25 g / 100 g	25 g / 100 g	50 g / 100 g
Mean particle size (D50)*2	5 μm	15 μm	10 μm	6 μm
Solubility	Insoluble in water or oils. Water repelling property			
Thermal stability	Stable below 200 °C			No data available
ISO 16128 natural origin index	1	1	1	1
Biodegradability*3	More than 73%	More than 67%	More than 68%	More than 64%

*1 Add Linum Usitatissimum (Linseed) Seed Oil (Reagent grage) little by little to about 1 g of powder and mix with a spatula. The end point is when the mixture become a lump, and the total amount of the added oil is measured in g. Oil absorption (g / 100g powder) is calculated form this total amount of oil.
*2 Mean particle size (D50) was measured using HELOS (laser diffraction particle size distribution analyzer, Japan Laser).
*3 (OECD TG301F, after 28 days)

Introduction video

Major Application

Make-up products : Powder foundation, bronzer, blush, eye-shadow, eye-liner, liquid foundation, BB/CC cream, make-up primer, concealer, lipstick, etc.
Sun care products : Sunscreen cream, lotion, gel, etc.
Skin care products : Cream, lotion, facial cleanser, shower gel, body soap, etc.
Hair care products : Shampoo, conditioner, hair cream, etc.

Product name	Product Code	Chemical Name	CAS No.	Physical Form	Packaging	INCI Name	Composition (%)
AMIHOPE™	SB-101	Silicon dioxide	7631-86-9	Powder	1kg Carton 10kg Carton	Silica	64.0
		Cellulose	9004-34-6			Microcrystalline Cellulose	27.0
		Nε-Lauroyl-L-Lysine	52315-75-0			Lauroyl Lysine	9.0
	SB-102	Starch	9005-25-8	Powder	1kg Carton 10kg Carton	Zea Mays (Corn) Starch	87.0
		Nε-Lauroyl-L-Lysine	52315-75-0			Lauroyl Lysine	8.0
		Cellulose	9004-34-6			Microcrystalline Cellulose	5.0
	SB-103	Starch	9005-25-8	Powder	1kg Carton 10kg Carton	Tapioca Starch	85.0
		Nε-Lauroyl-L-Lysine	52315-75-0			Lauroyl Lysine	15.0
	SB-201	Silicon dioxide	7631-86-9	Powder	1kg Carton 10kg Carton	Silica	63.4
		Behenyl Alcohol	661-19-8			Behenyl Alcohol	25.3
		N-Stearoyl-L-Glutamic Acid	3397-16-8			Stearoyl Glutamic Acid	11.3

AMIHOPE™ SB-201 contains 0.1% of Tocopherol.

Please contact the AJINOMOTO group, if you have any question about trademark registration.

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Eat Well, Live Well.
AJINOMOTO

Sustainable beads as alternatives to plastic microbeads

AMIHOPE™ SB series

SB-101/SB-102/SB-103 NEW SB-201



AMIHOPE™ SB series are highly biodegradable and functional composite powders made from naturally derived ingredients, which have nice texture like plastic microbeads. In addition, SB series also have excellent functionality such as soft-focus effects and SPF boosting effects. AMIHOPE™ SB series can be applied in a variety of formulations such as makeup products, skin care products and others.

AMIHOPE™ SB-101

Texture Light and smooth
Function High SPF boosting effect

AMIHOPE™ SB-102

Texture Well-balance of smoothness and moistness
Function High soft-focus effect

AMIHOPE™ SB-103

Texture Moist, soft, and creamy
Function High adhesiveness and improved moldability of powder formulations

AMIHOPE™ SB-201

Texture Smooth and silky
Function Prevented aggregation in powder formulations and enhanced glide performance in liquid formulations

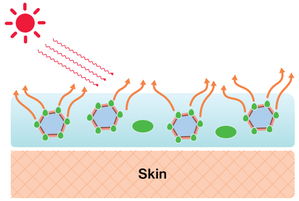
AMIHOPE™ SB-101

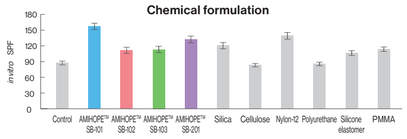
High SPF boosting effect

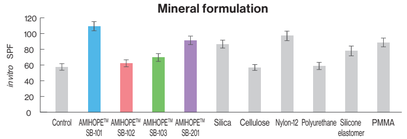
AMIHOPE™ SB-101 can be expected as SPF booster when used in combination with UV protection agents.

Estimated mechanism

UV protectors have absorbed onto hydrophobic lauroyl lysine treated particles.







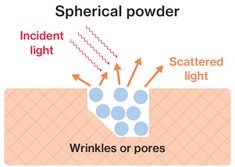
<Procedure>
W/O chemical BB cream and mineral sunscreen containing 3% of each powder were prepared, and the *in vitro* SPF values were calculated using an SPF analyzer UV-2000S(Labsphere).

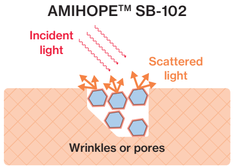
(TSD 05011142.05011152)

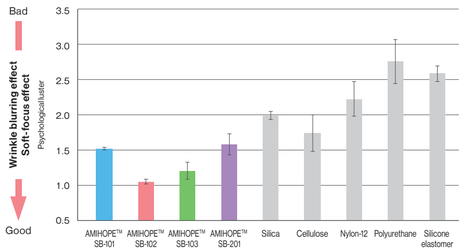
AMIHOPE™ SB-102

High soft-focus effect

AMIHOPE™ SB series have superior soft-focus effect compared to other spherical powders. Especially AMIHOPE™ SB-102 shows remarkable effect.







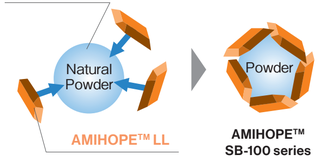
(TSD 05011160)

AMIHOPE™ SB-102 has a fine surface roughness derived from the composite of lauroyl lysine, which has large specific surface area. Owing to the surface property, AMIHOPE™ SB-102 is thought it shows high diffuse reflection.

Surface treatment differences in AMIHOPE™ SB series

AMIHOPE™ SB-100 series

Core powder



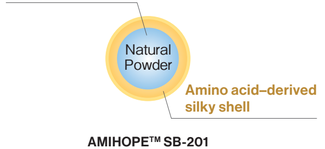
AMIHOPE™ LL (Lauroyl Lysine)



- Soft and moist texture
- Smoothness and excellent adhesion derived from plate-like crystals

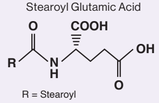
AMIHOPE™ SB-201

Core powder



Amino Acid-derived Silky Shell

Stearoyl Glutamic Acid

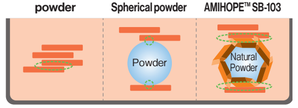


- A smooth and slippery texture
- Thermal stability imparted by stearoyl glutamic acid

AMIHOPE™ SB-103

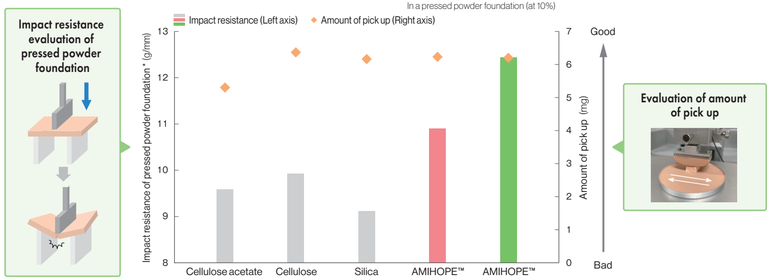
High adhesiveness and improved moldability

By adding AMIHOPE™ SB-103 into the pressed powder foundation, it is possible to achieve both resistance to cracking and ease of pick-up with a puff.



Spherical powders enhance texture and flowability, but reduce moldability compared to plate-like powders. The AMIHOPE™ SB-100 series deliver improved texture without compromising moldability by coating spherical powders with the plate-like powder "AMIHOPE™ LL."

In a pressed powder foundation (at 10%)

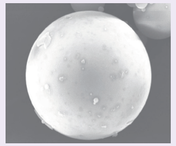


* Impact resistance = Breaking strength / Cake thickness

(TSD 05011090)

NEW

AMIHOPE™ SB-201

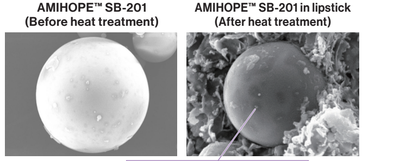


Prevented aggregation in powder formulations Enhanced glide performance in liquid formulations

AMIHOPE™ SB-201 offers a smooth and silky texture due to the amino acid–derived silky shell on the surface of its spherical powder particles, which imparts a slippery feel. AMIHOPE™ SB-201 also prevents aggregation issues in powder formulations, and enhances gliding sensory in liquid formulations.

Thermal stability of AMIHOPE™ SB-201 in oil-based formulations

The amino acid–derived silky shell on the surface of AMIHOPE™ SB-201 did not melt or peel off during the heating treatment at 100℃ for 30 min in the preparation of oil-based formulations.

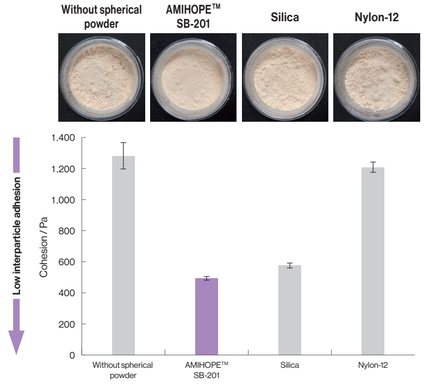


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Evaluation of cohesion in loose powder

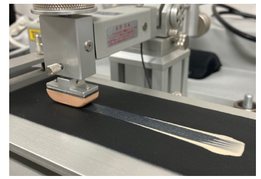
In a loose powder formulation (at 10%)

Loose powder containing AMIHOPE™ SB-201 shows significantly fewer clumps and lower cohesion than other spherical powders, indicating that AMIHOPE™ SB-201 prevents aggregation and adheres more uniformly to both the puff and the skin.



(TSD 05011230.05011240)

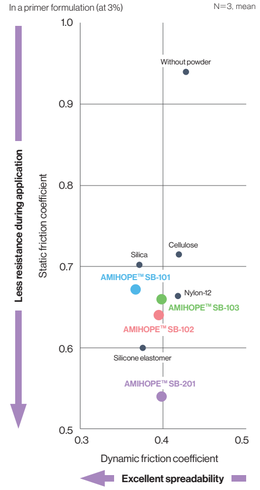
Evaluation of primer glide performance



AMIHOPE™ SB-201 offers a lower static friction coefficient compared to other powders, reducing resistance during application and delivering a smooth, comfortable texture.

In a primer formulation (at 3%)

N=3, mean



(TSD 05011210)