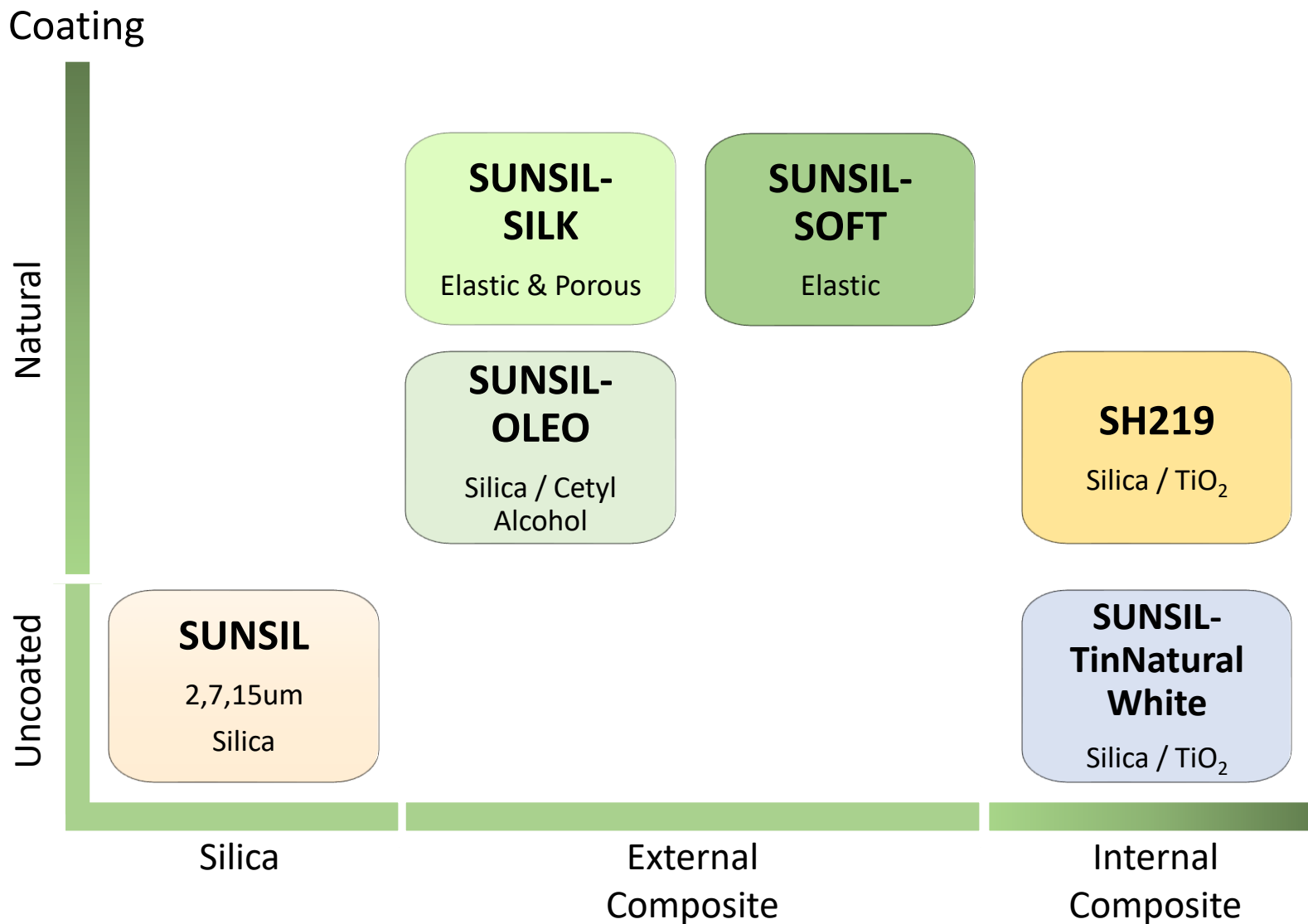


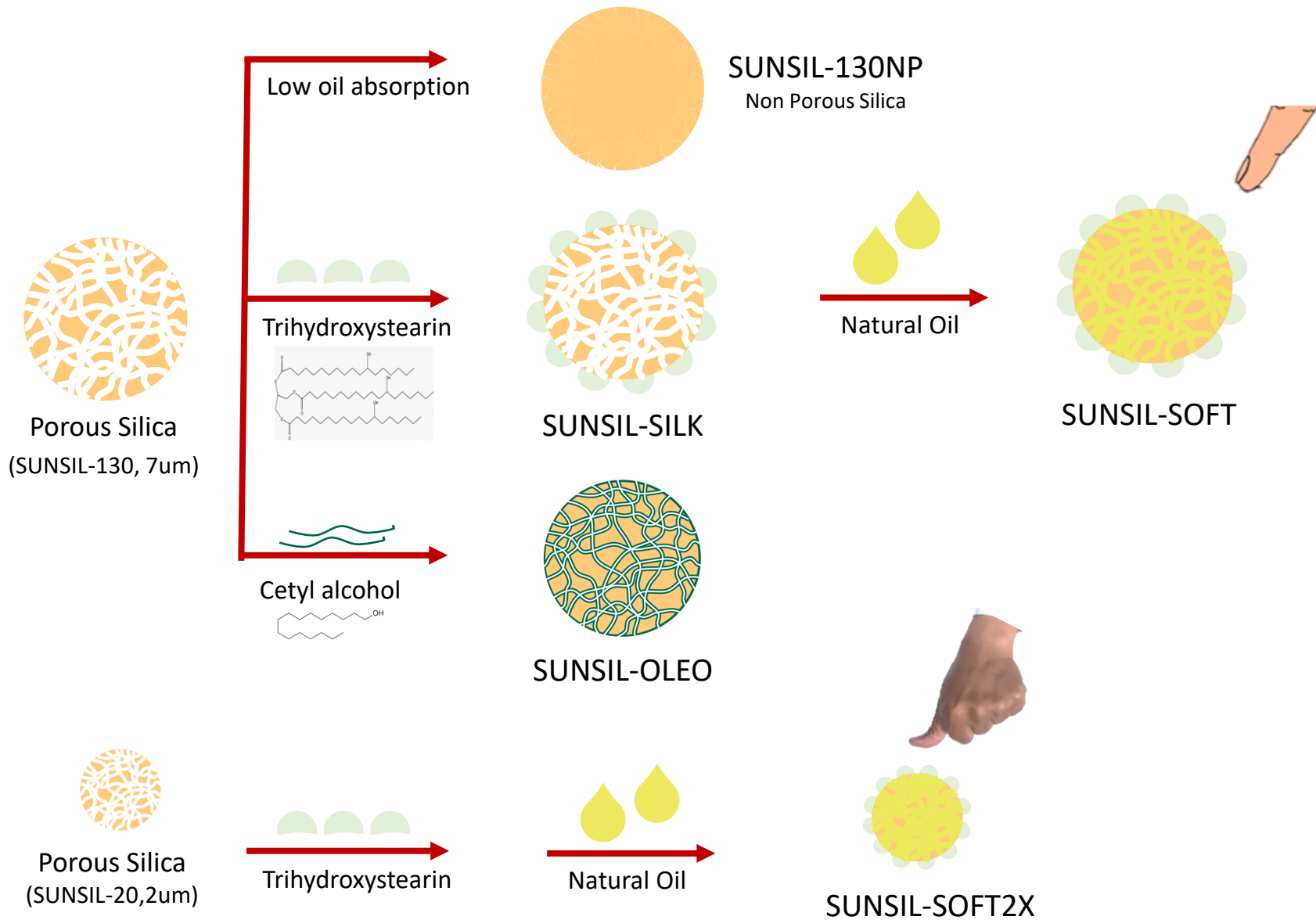
Silica beads

SUNJIN BEAUTY SCIENCE
MAR. 2020
Ver 1.0

Silica overview



Micro Plastic Replacements



Silica

Product	INCI Name	Particle Size	Shape	Oil Absorption	ECOCERT	COSMOS	RSPO
Porous Silica		(μm)					
SUNSIL-20	Silica	2	Spherical(Porous)	0.9-1.3	√	√	
SUNSIL-50	Silica	5	Spherical(Porous)	0.9-1.3			
SUNSIL-130L	Silica	7	Spherical(Porous)	0.6-0.9	√	√	
SUNSIL-130	Silica	7	Spherical(Porous)	0.9-1.3	√	√	
SUNSIL-130H	Silica	7	Spherical(Porous)	1.3-1.7	√	√	
SUNSIL-150H	Silica	13	Spherical(Porous)	1.4-2.1	√	√	
Non Porous Silica							
SUNSIL-130NP	Silica	7	Spherical	0.3-0.6	√	√	
Surface treated Silica							
SUNSIL-130LSC	Silica & Methicone	6-9	Spherical(Porous)	0.6-0.9			
SUNSIL-130SC	Silica & Methicone	6-9	Spherical(Porous)	0.9-1.3			
SUNSIL-130HSC	Silica & Methicone	6-9	Spherical(Porous)	1.1-1.7			
SUNSIL-150HSC	Silica & Methicone	10-15	Spherical(Porous)	1.2-2.0			
Natural & Lipophilic Silica bead							
SUNSIL-OLEO20	Silica & Cetyl alcohol	2	Spherical(Porous)	0.6-1.0		√	√
SUNSIL-OLEO130	Silica & Cetyl alcohol	7	Spherical(Porous)	0.6-1.0		√	√
SUNSIL-OLEO150H	Silica & Cetyl alcohol	13	Spherical(Porous)	1.1-1.8		√	√
SUNSIL-OLEO20 LITE	Silica & Cetyl alcohol	2	Spherical(Porous)	0.5~0.9		√	√
SUNSIL-OLEO130 LITE	Silica & Cetyl alcohol	7	Spherical(Porous)	0.6~1.0		√	√
Elastic PMMA Replacement							
SUNSIL-SILK	Silica & Trihydroxystearin	7	Spherical(Porous)	0.2-0.4		√	
SUNSIL-SOFT	Silica & Trihydroxystearin & Macadamia Ternifolia Seed Oil	7	Spherical			√	
SUNSIL-BN	Silica & Mica & Lauroyl Lysine & Trihydroxystearin	7	Spherical & Plate			√	

Silica

Product	INCI Name	Particle Size	Shape	Oil Absorption	ECOCERT	COSMOS	RSPO
Instant whitening agent							
SUNSIL-TinNaturalWhite	Silica & Titanium Dioxide	5	Spherical		√	√	
SUNSIL-TinNaturalWhite(CO)	Silica & Titanium Dioxide & Hydrogen Dimethicone	5	Spherical				
Soft Focusing Agent							
SH-219	Silica & Titanium Dioxide	2-7	Spherical		√	√	
SH-219-AS	Silica & Titanium Dioxdie & Triethoxy Caprylylsilane	2-7	Spherical				

Silica Bead

NATURAL
Shine Control
Immediate Mattifying
Fast Absorption
Velvety Finish



Natural Hydrophilic COSMOS Silica Bead

SUNSIL-series approved
by COSMOS, Natural
Origin Silica Beads



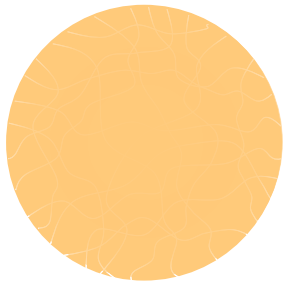
Porous SILICA BEADS

Grade	Descriptions	Particle size(μm)	Oil Absorption (cc/g)
SUNSIL-20	Porous Silica	2	0.9~1.3
SUNSIL-130L	Porous Silica	7	0.6~0.9
SUNSIL-130	Porous Silica	7	0.9~1.3
SUNSIL-130H	Porous Silica	7	1.3~1.7
SUNSIL-150H	Porous Silica	13	1.4~2.1



Non Porous SILICA BEAD

Grade	Descriptions	size(μm)	(cc/g)
SUNSIL-130NP	Non Porous Silica	7	0.3~0.6



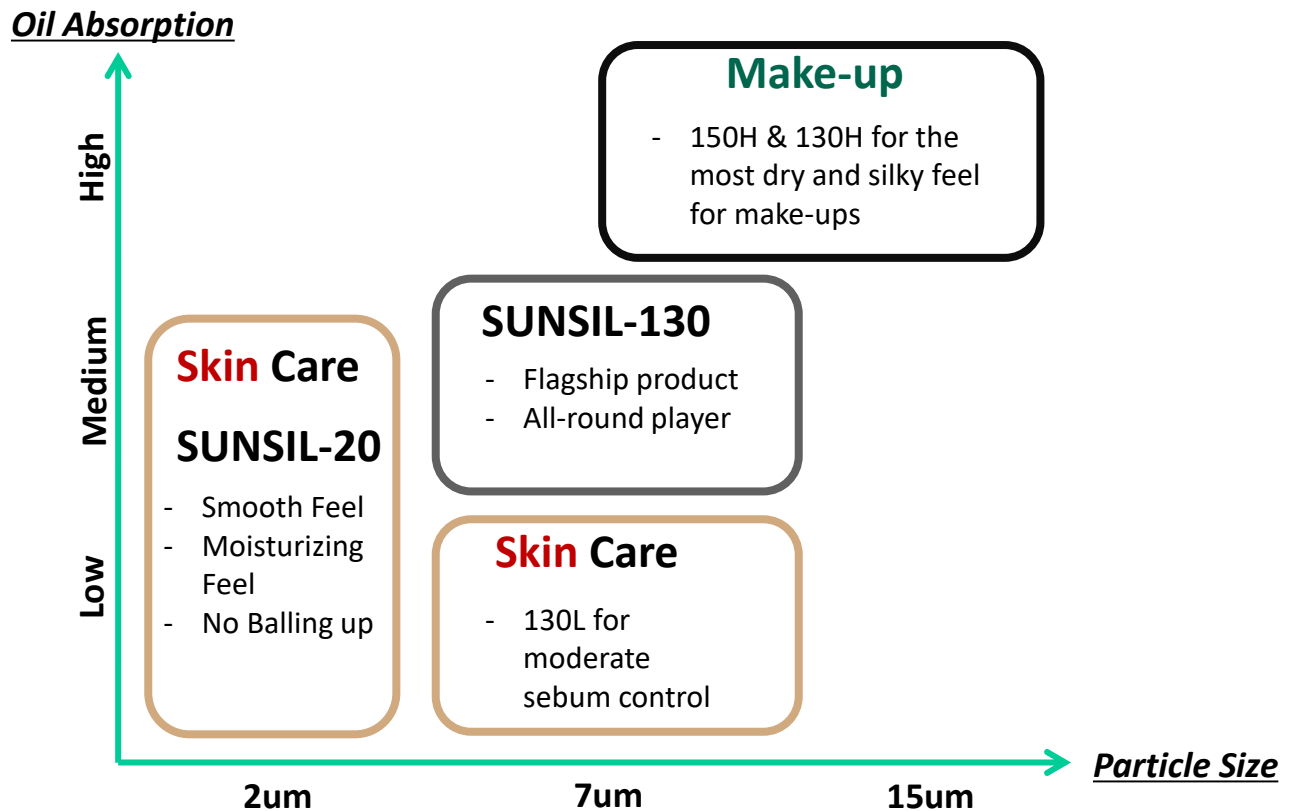
How to select Silica Beads?

As to sensory feel, it is said that the smaller silica beads feel wetter while the larger silica beads feel drier

So the small size beads suit more for skin care while bigger beads for make-ups

$$\text{Sebum Control} = f(\text{Oil Absorption})$$

$$\text{Sensory Feel} = f(\text{Particle Size})$$

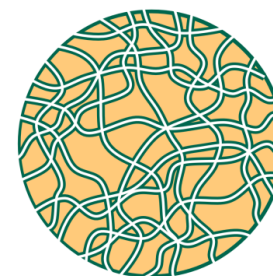


Hydrophobic COSMOS Silica Bead: SUNSIL-OLEO

“Natural & Lipophilic & COSMOS”

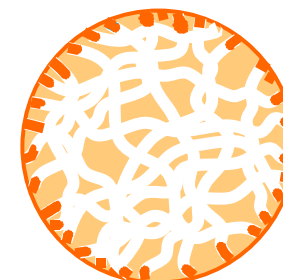


Grade	Interior & exterior treated by	size(μm)	(cc/g)
SUNSIL-OLEO20	Cetyl Alcohol	2 μm	0.9~1.3
SUNSIL-OLEO130	Cetyl Alcohol	7 μm	0.9~1.3
SUNSIL-OLEO150H	Cetyl Alcohol	13 μm	1.4~2.1



Methicone Coated SILICA BEADS

Grade	Descriptions	size(μm)	(cc/g)
SUNSIL-130LSC	Hydrophobic Silica	6~9	0.6~0.9
SUNSIL-130SC	Hydrophobic Silica	6~9	0.9~1.3
SUNSIL-130HSC	Hydrophobic Silica	6~9	1.1~1.7
SUNSIL-150HSC	Hydrophobic Silica	10~15	1.2~2.0



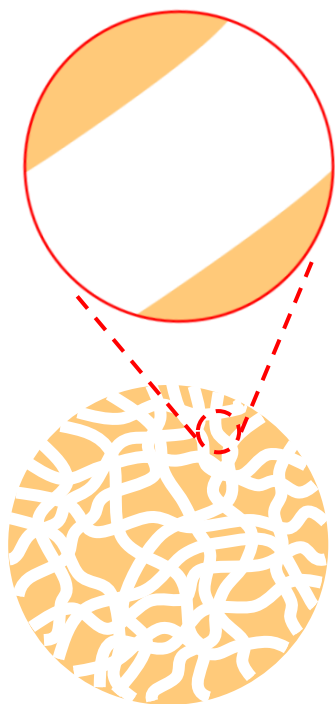
SUNSIL OLEO

OLEO coating
COSMOS
Hydrophobic

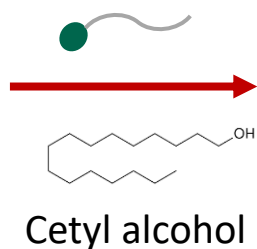


SUNSIL-OLEO : Natural Lipophilic COSMOS Silica Bead

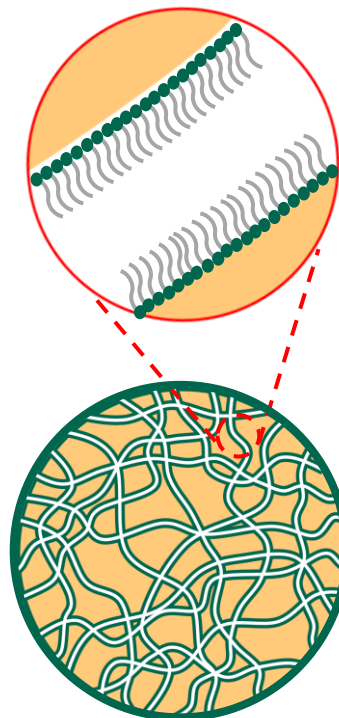
SUNSIL-130



Silica Bead

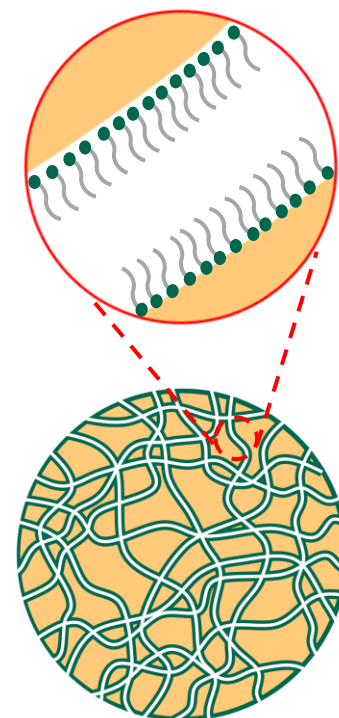


SUNSIL-OLEO130



Cetyl Alcohol **20%**

SUNSIL-OLEO130 LITE



Cetyl Alcohol **10%**

Silica bead with **Interior and Exterior surface** treated with Cetyl Alcohol to provide complete **hydrophobicity**

SUNIL-OLEO Series



LITE series means
Less Cetyl Alcohol
and Cheaper than
Standard OLEO
series

Grade	INCI	Coating Amount	Size	Oil Absorption
SUNSIL-OLEO20	Silica & Cetyl Alcohol	20%	2um	0.9~1.3 cc/g
SUNSIL-OLEO130	Silica & Cetyl Alcohol	20%	7um	0.9~1.3 cc/g
SUNSIL-OLEO150H	Silica & Cetyl Alcohol	20%	13um	1.4~2.1 cc/g
SUNSIL-OLEO20 LITE	Silica & Cetyl Alcohol	15%	2um	0.5~0.9 cc/g
SUNSIL-OLEO130 LITE	Silica & Cetyl Alcohol	10%	7um	0.6~1.0 cc/g

KIPO Patent Number : 1018476240000 & 1018476230000



Have you ever seen **"Natural & Lipophilic"** micro bead?

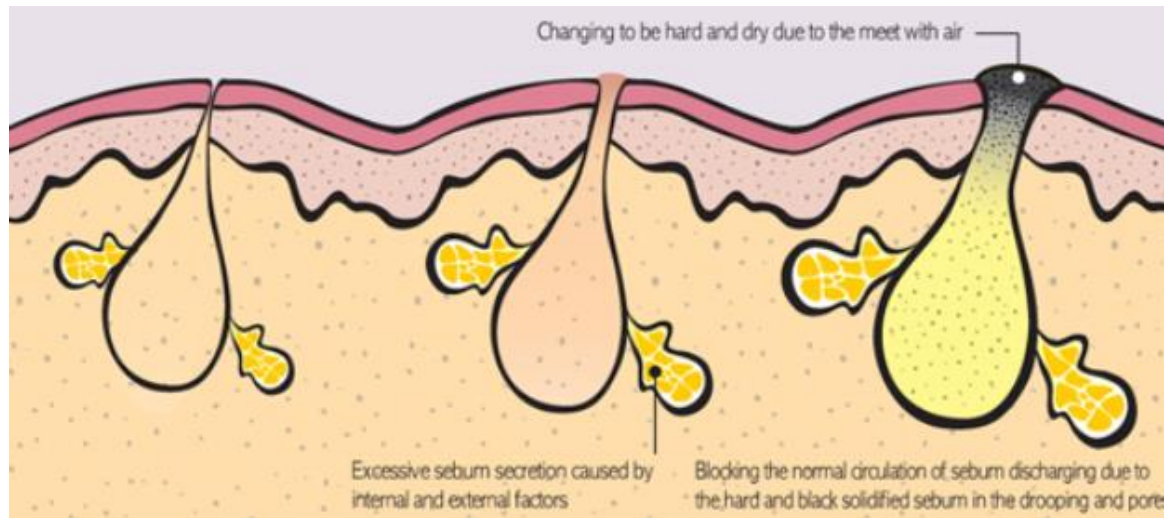
Benefits of **Lipophilic** Powder in Skin Care

- 1. Selective Sebum Absorption**
- 2. Fast Absorption**
- 3. Thickener Compatibility**
- 4. Spread**
- 5. No Balling up**



Benefit #1:

Selective Sebum Absorption

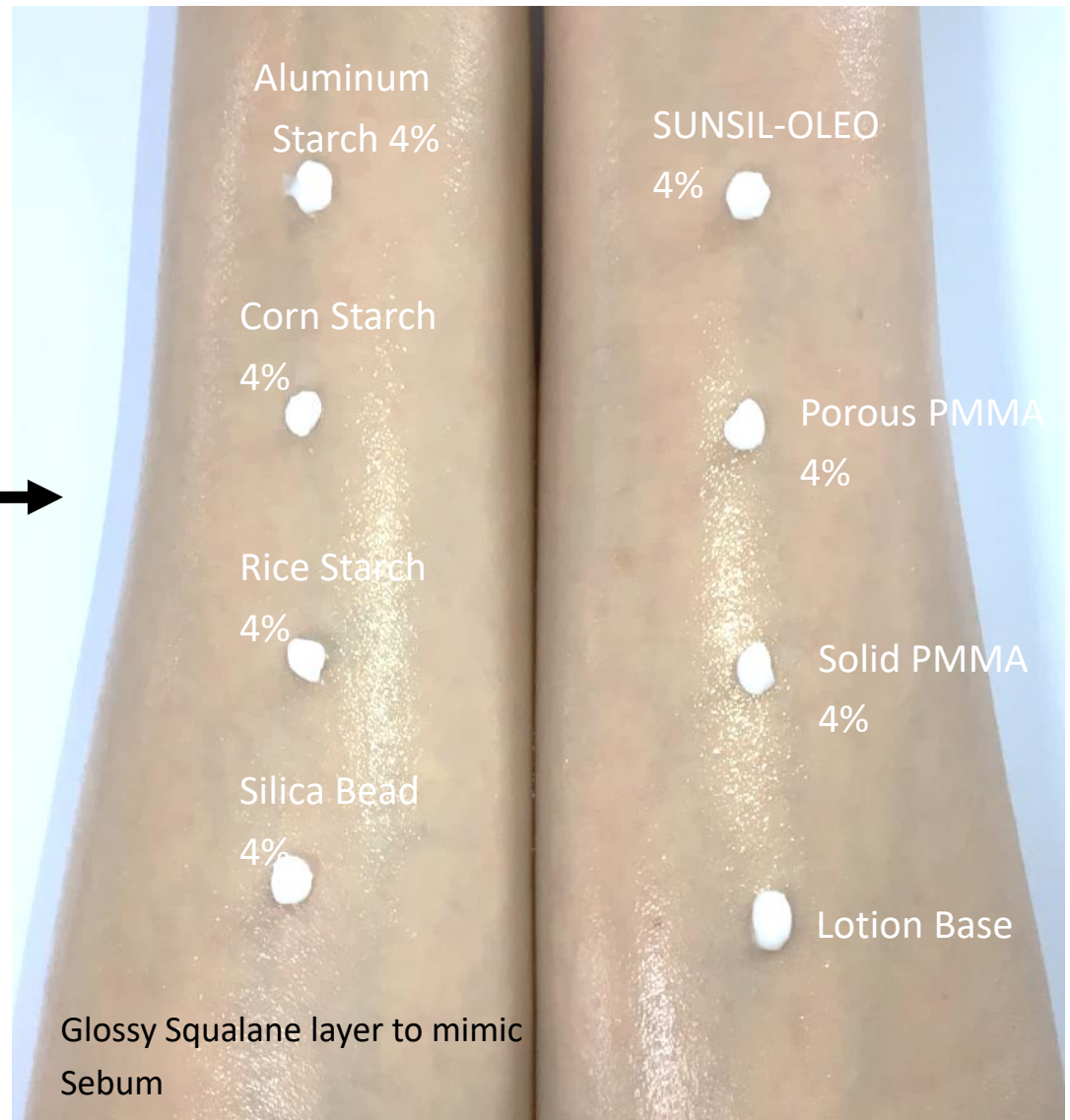


**Selectively Sebum Only
not moisture**

Simple Test



Add powder 4%



Selective Sebum Absorption



Benefit #2: Fast Absorbing



Benefit #2:

Fast Absorption Test



Aston and Sunjin Fast Absorption Effect August 2015

조회수 342회

13 0 공유

<https://www.youtube.com/watch?v=EscqYZZEnI>



SUNJIN BEAUTY SCIENCE

게시일: 2015. 10. 4.

구독 12

Fast Absorption Test Results

			15sec	20sec	30sec	45sec	60sec
O/W Essence							
Aluminum Starch							
Corn Starch							
Rice Starch							
SUNSIL-20							
SUNSIL-OLEO20							
SUNPMMA-P20 (2μm)							

Test Condition: Powder
4% in O/W Essence

Benefit #3:

Thickener Compatibility

Tested Powder

#1. Company: 'A'
Product: 'D.F.PC'
Aluminum Starch Octenylsuccinate

#2. Company : 'D'
Product : 'M.C.S'
Zea Mays(Corn) Starch

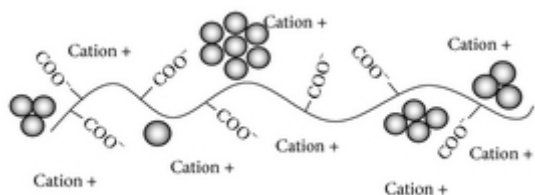
#3. Company : 'D'
Product : 'M.R.S'
Oryza Sativa(Rice)Starch

#4. Company : SUNJIN
Product :SUNSIL-130 (Silica)

#5. Company: SUNJIN
Product : SUNSIL-OLEO130
Silica, Cetyl Alcohol

#6. Company : SUNJIN
Product : SUNPMMA-P

#7. Company : SUNJIN
Product : SUNPMMA-S



Tested Thickener

Aristoflex AVC (0.4%)
Ammonium Acryloyldimethyl
taurate/VP Copolymer

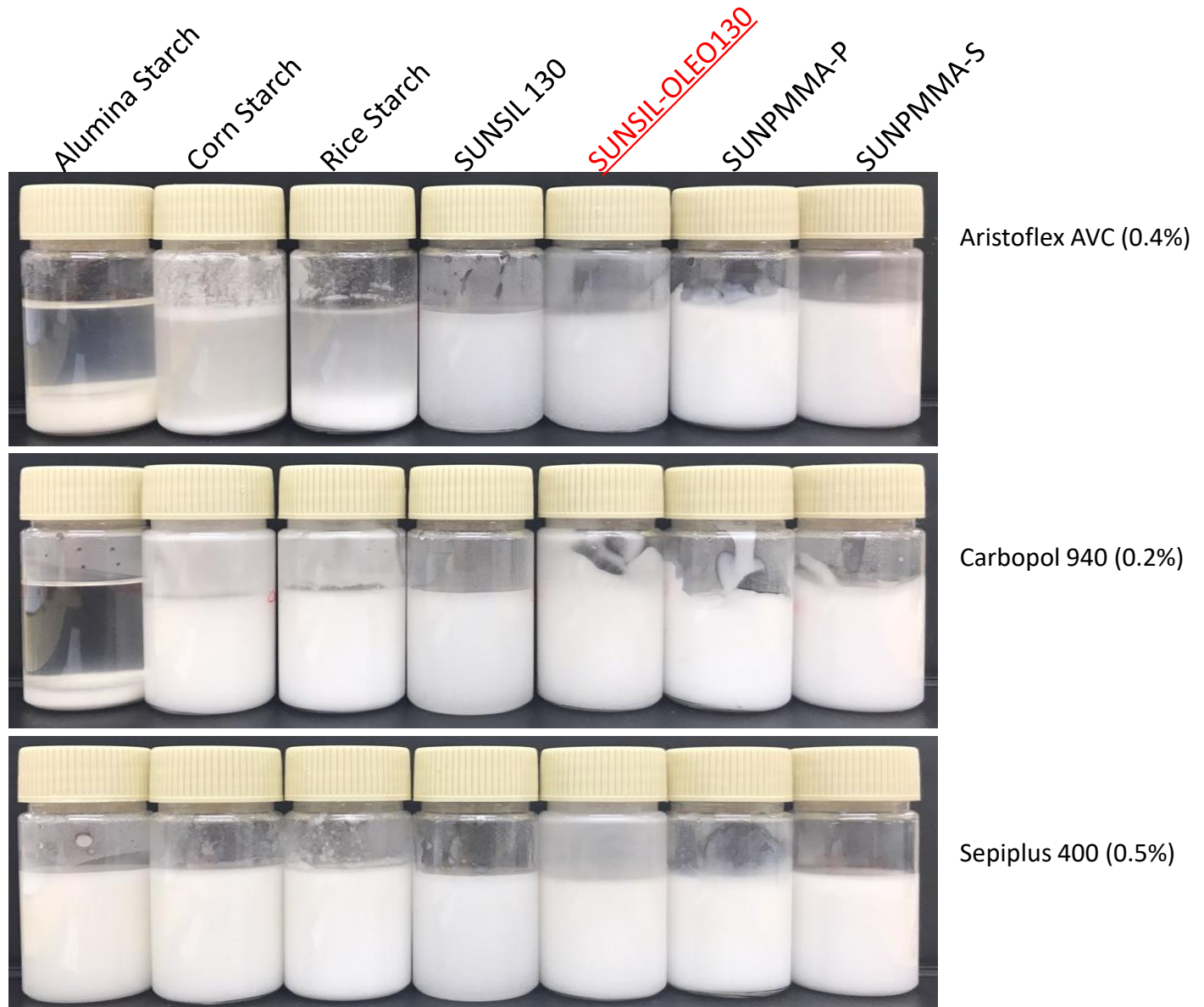
Carbopol 940 (0.2%)
Carbomer

Sepiplus 400 (0.5%)
Polyacrylate-13 &
Polyisobutene &
Polysorbate 20

Tested Formula

Part	Product Name	%
A	D.I. Water	90
	Thickener	
B	Powder	3
	1.3 B.G	7

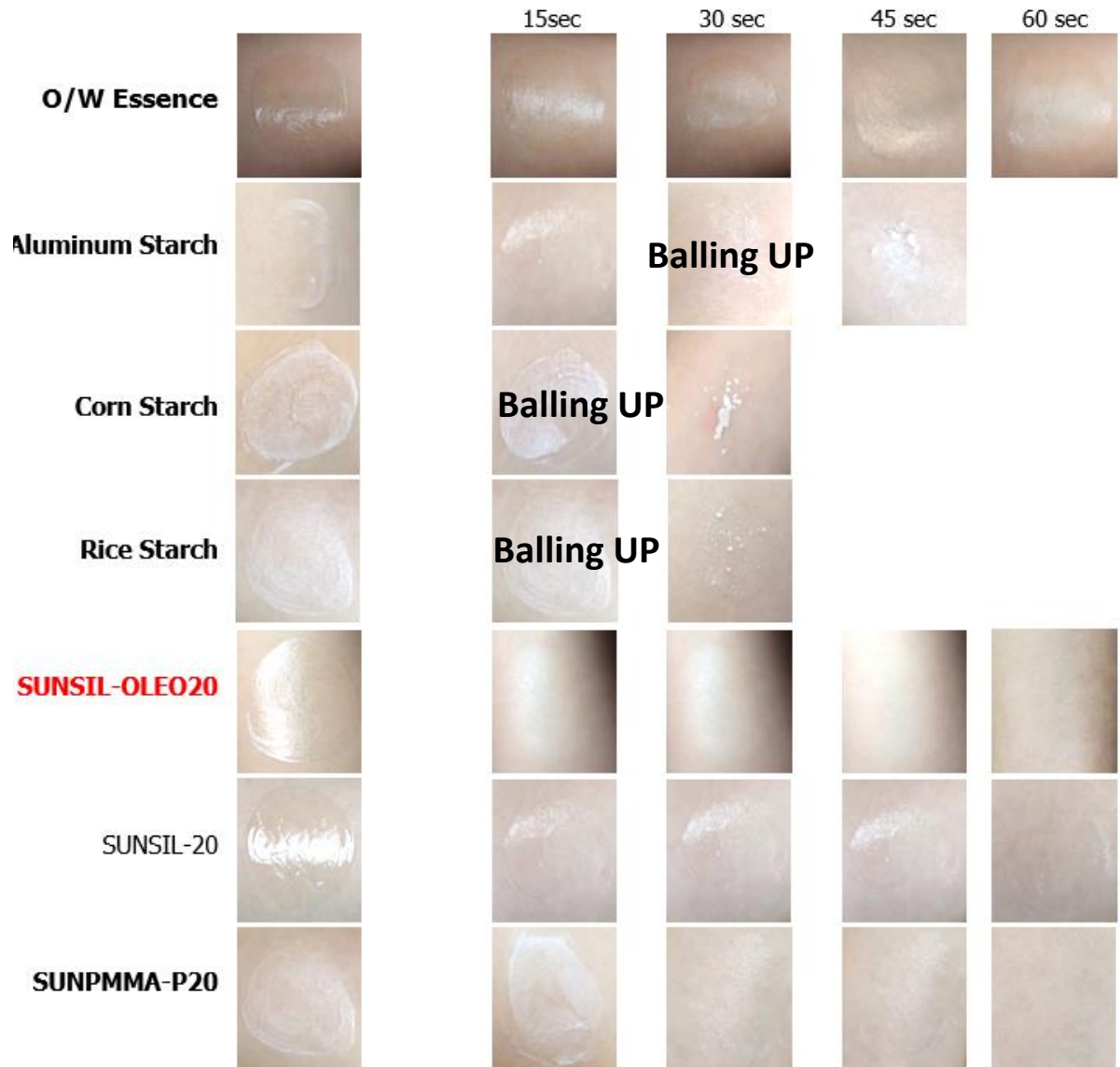
Test Result: Thickener compatibility



Benefit #4: Spread



Benefit #5: No Balling Up



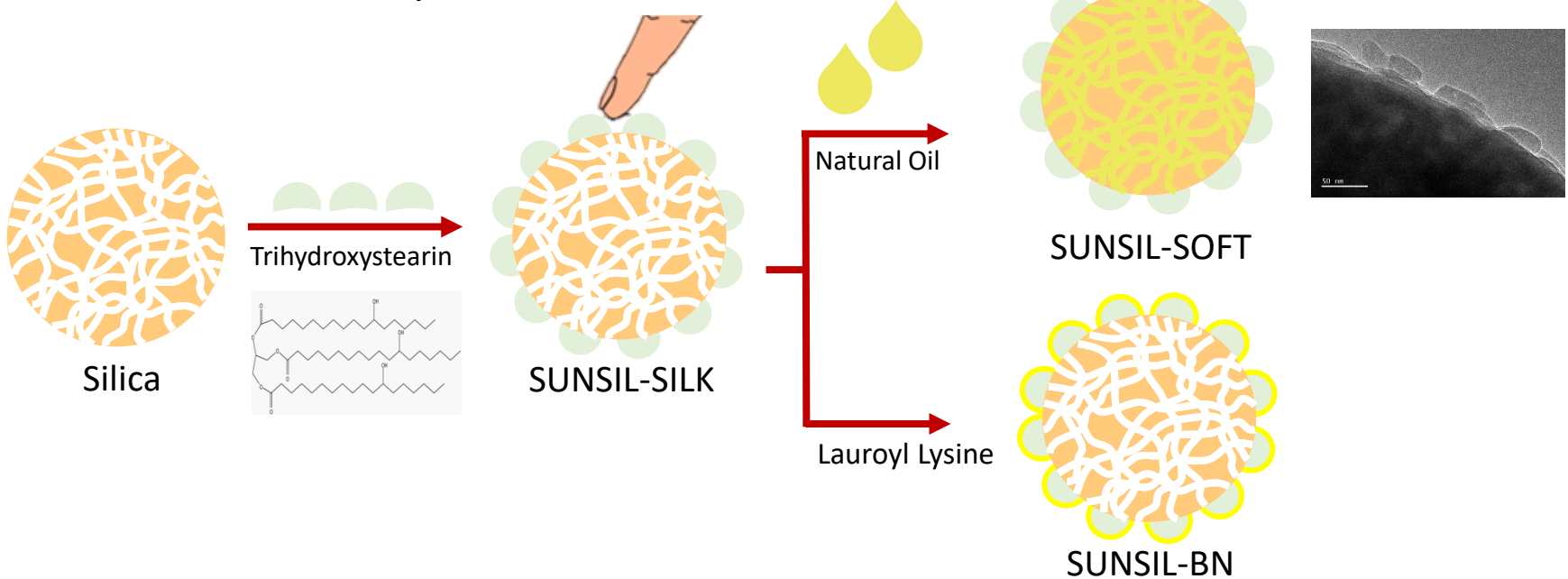
SUNSIL-SOFT & SILK

Elastic
PMMA
Replacement



SUNSIL Series

for Elastic PMMA Replacement



SUNSIL-SILK

INCI

Silica & Trihydroxystearin

Particle Size

7 μm

Oil Absorption

0.2 ~ 0.4 cc/g

Elastic & Porous

SUNSIL-SOFT

INCI

Silica & Trihydroxystearin
& Macadamia Ternifolia
Seed Oil

Particle Size

7 μm

Elastic

SUNSIL-BN

INCI

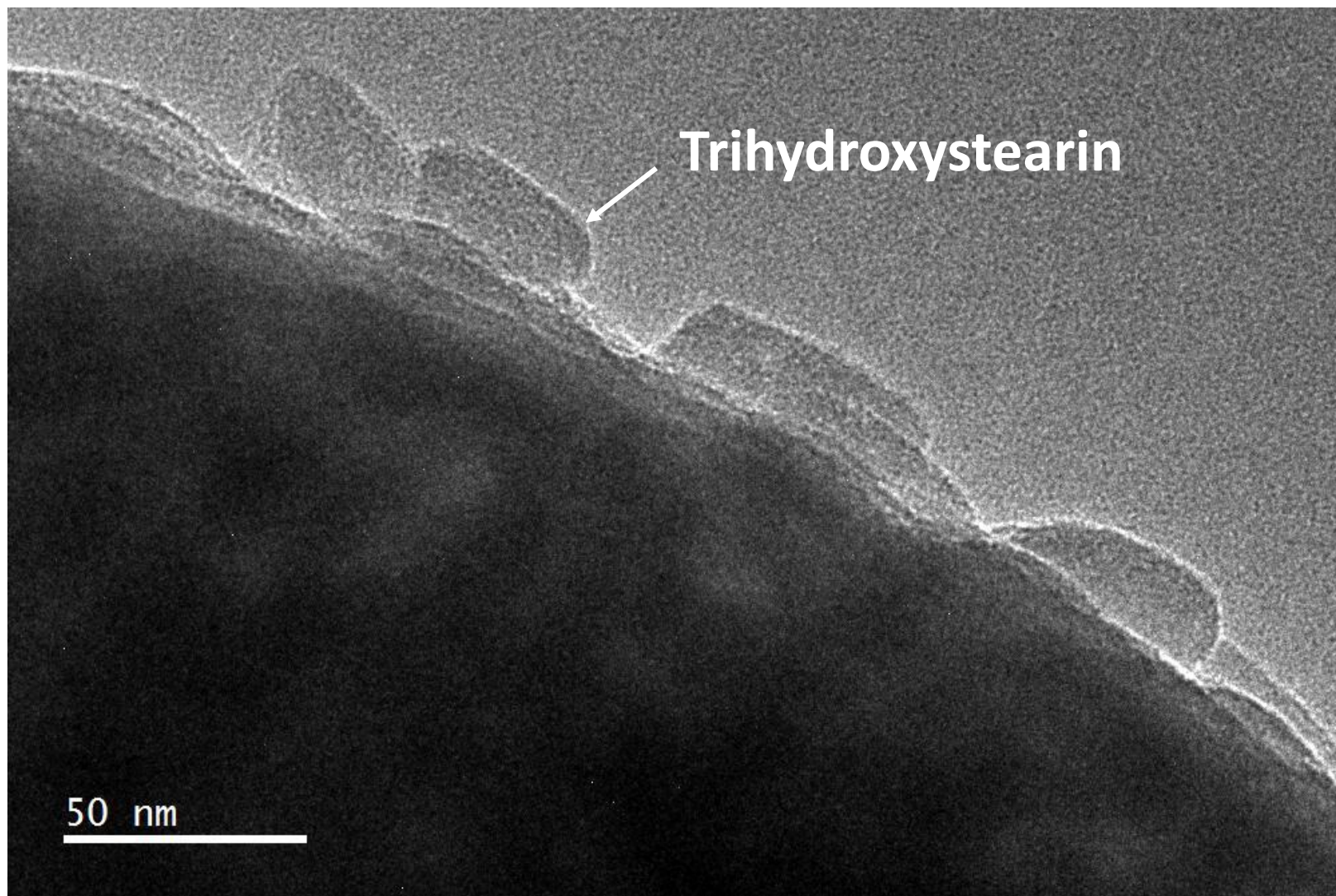
Silica & Mica & Lauroyl
Lysine & Trihydroxystearin

Particle Size

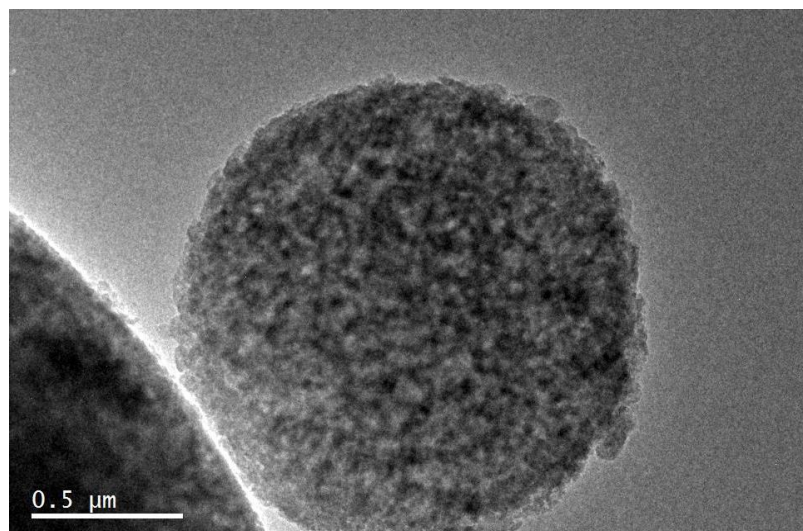
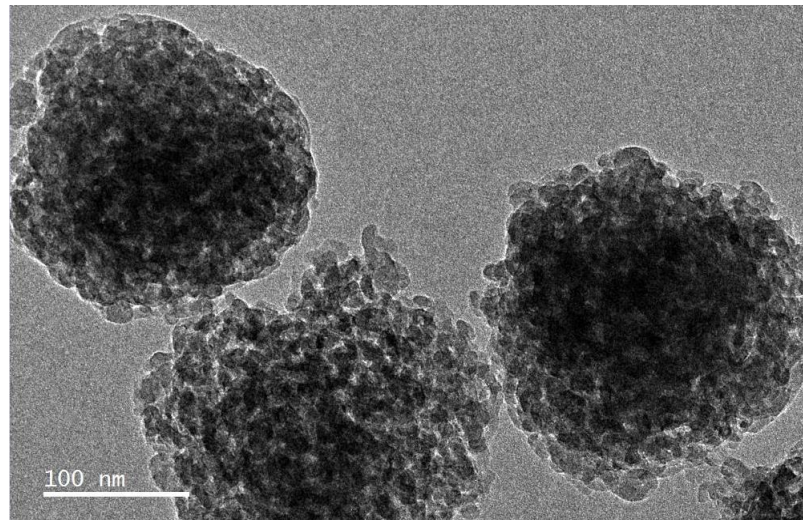
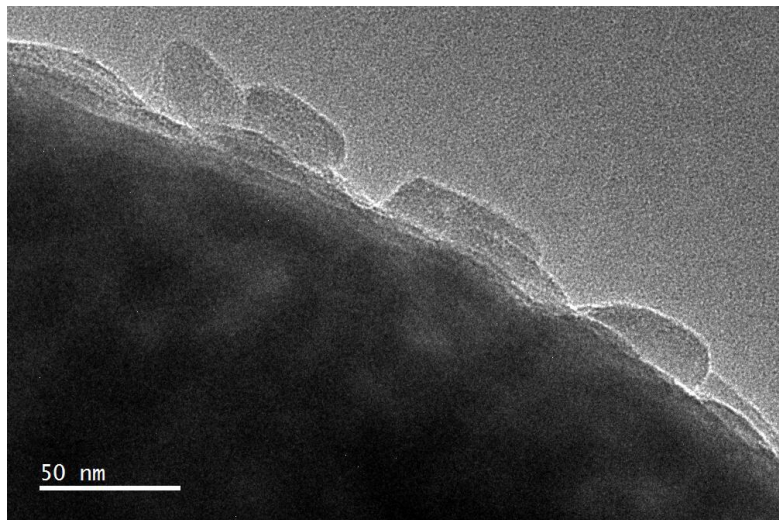
7 μm

Elastic & Spreadable

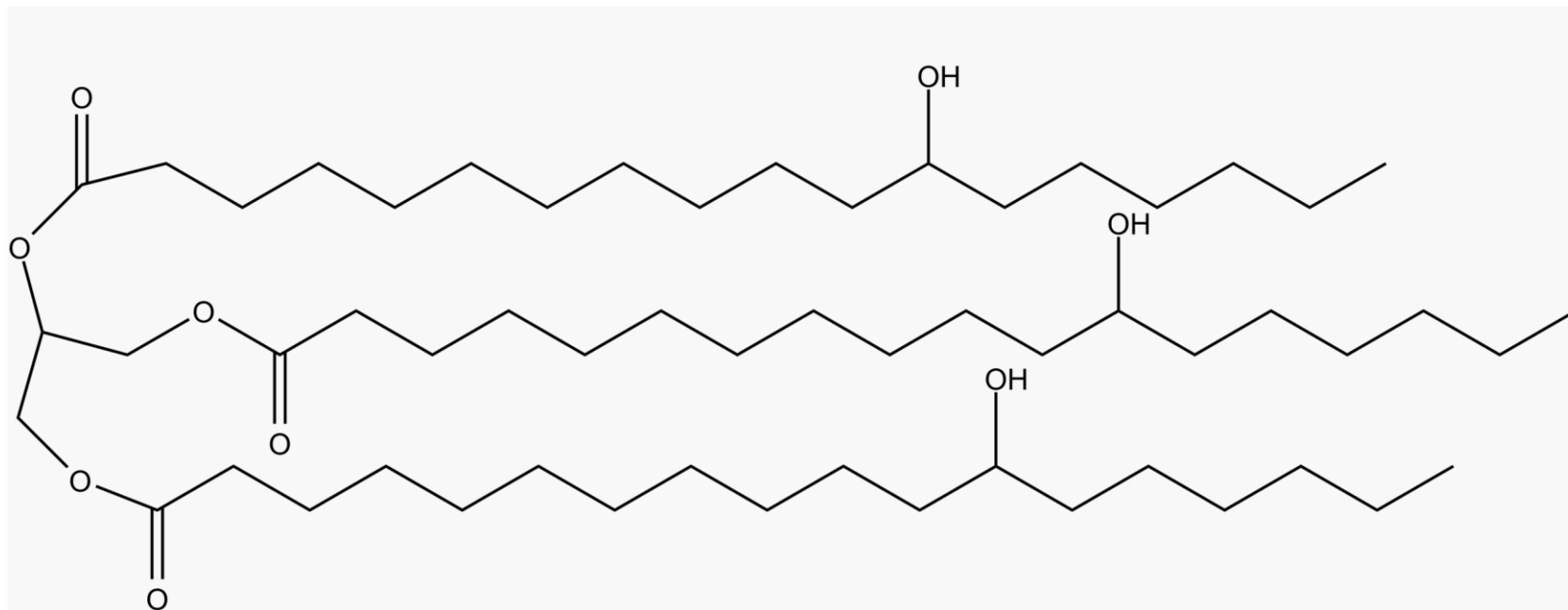
TEM of SUNSIL-SOFT



TEM of SUNSIL-SOFT



Trihydroxystearin



SH219: High Refractive Index Silica Bead

Soft Focusing
Agent

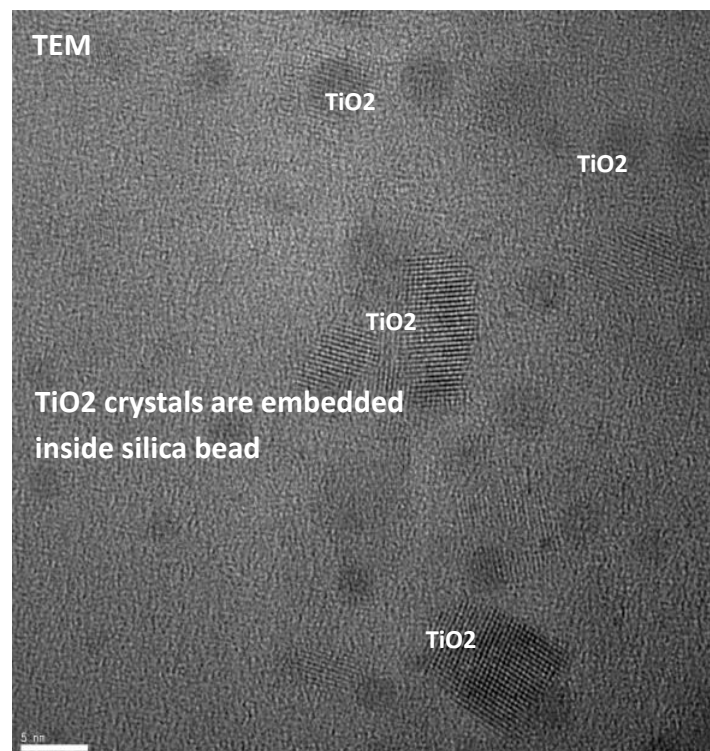
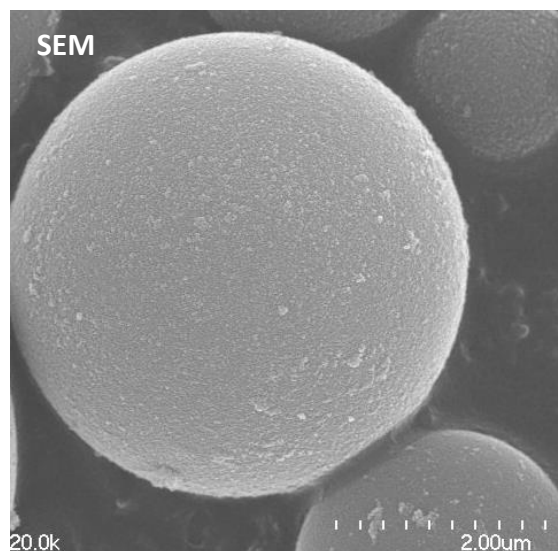


SH219 : High Refractive Index Bead

with the refractive index of 1.8

SH219 is **non-nano**
COSMOS material

Grade	Composition (Silica/TiO ₂)	Refractive Index	Surface treatment	Silica Bead size
SH219	Silica 75% TiO ₂ 25%	1.8	none	5μm
SH219-AS	Silica 67% TiO ₂ 25% AS 8% Max.	1.8	Alkyl Silane	5μm



SH219 application Eye Care & Wrinkle Care

SH219 is by far the most efficient soft focusing agent as shown here

Ideal micro bead for eye care & anti wrinkle which need soft focus effect

RI=1.8

SH219

Urethane Bead
PU170

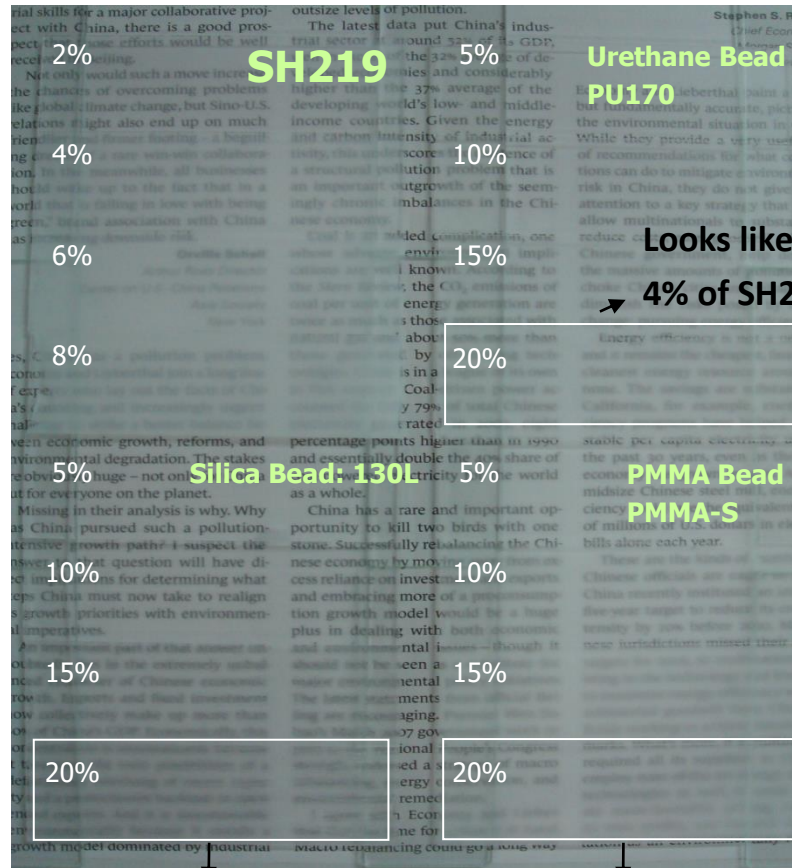
RI=1.52

RI=1.47

Silica Bead: 130L

PMMA Bead
PMMA-S

RI=1.49



Looks like 3% of SH219

Looks like 5% of SH219

SH219 application : Primer

SH219

Approved by ECOCERT,
Natural origin Soft focus
agent

SJF-0801-Primer-ver.1.0

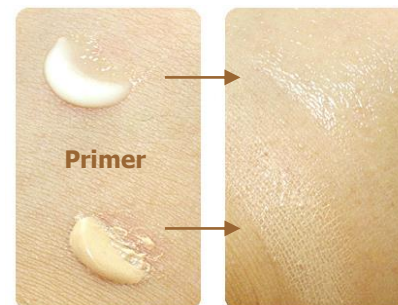
Phase	No.	Trade Name	INCI Name	%
A	1	Water	Water	45.44
	2	Glycerin	Glycerin	5.00
B	3	KF6100	Polyglyceryl-3Disiloxane Dimethicone	1.00
	4	Phenoxy ethanol	Phenoxyethanol	0.10
	5	TSF405	Cyclopentasiloxane	10.00
	6	KSG16	Dimethicone/Dimethicone Crosspolymer	30.00
C	7	Sepigel305	Polyacrylamide/C13-C14 Isoparaffin/Laureth-7	1.00
D	8	SH219	Silica/ Titanium dioxide	7.50

What is Primer?

Foundation primer is a relatively new product offered on the market. It creates a barrier between your skin & the foundation and helps the foundation go on smoothly.

it actually works much like a moisturizer under your foundation does: they ease the application of foundation and are meant to create a barrier between foundation and skin.

Makeup artists swear primers go one step further than moisturizers: They'll even out skin tone, help your makeup stay on longer



Marketing Claims of Primers

Going make-up free

Skin look smoother and more even-toned on my make-up free days

Primer primarily meant to mattify

Oil free moisturizer



SUNSIL-TinNatural White

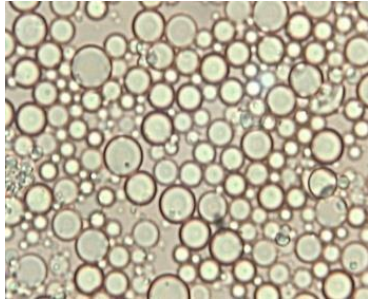
Instant Whitening
for Skin Care

Natural Whitening
for Make-ups



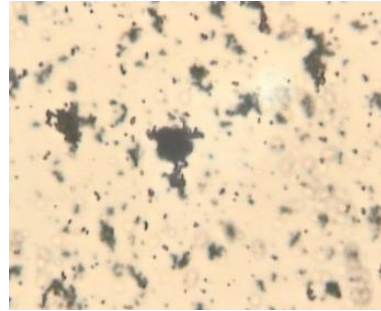
Something Better: Instant Whitening Bead

Silica Bead



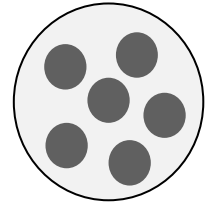
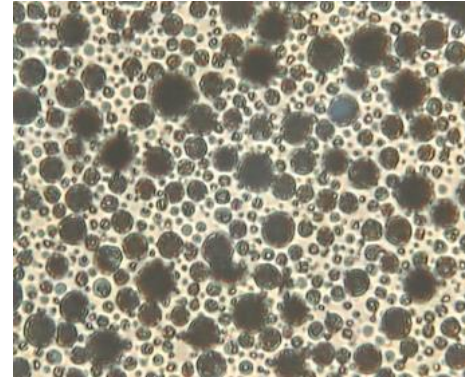
+

TiO₂



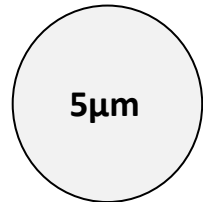
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SUNSIL-TinNaturalWhite

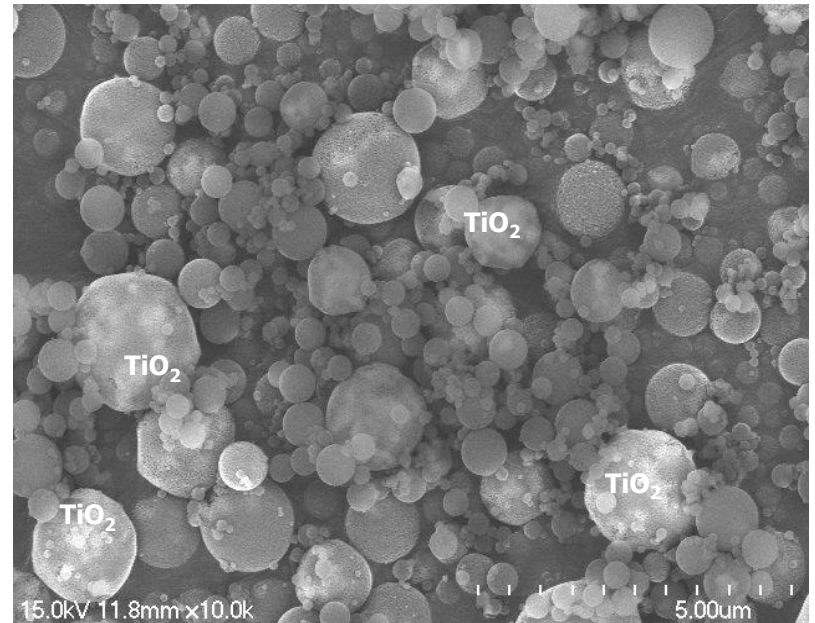
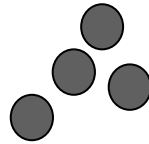


TiO₂ 35%

SiO₂ 65%

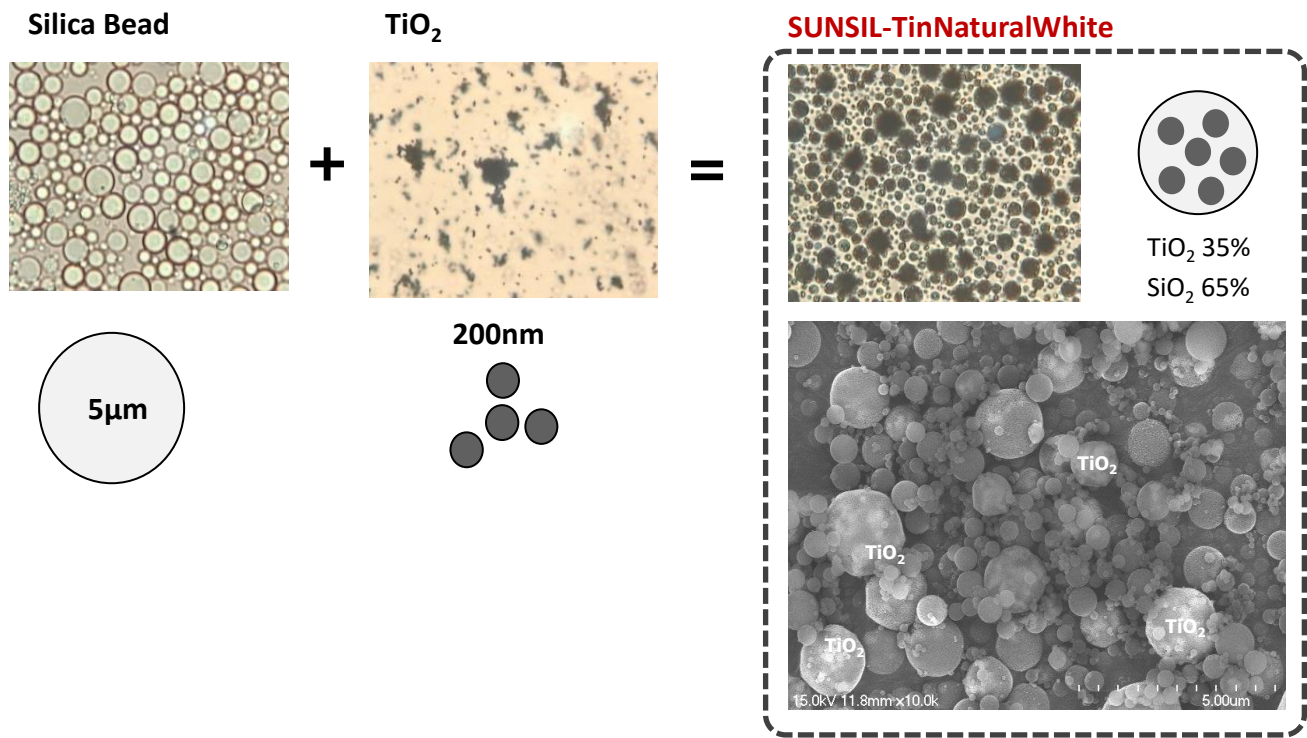


200nm



SUNSIL-TinNaturalWhite: Instant Whitening Bead

Grade	Descriptions	Surface Treatment	Avg. Particle size(μm)
SUNSIL-Tin NaturalWhite(CO)	200nm TiO_2 35% & Silica 65%	Hydrogen Dimethicone	5
SUNSIL-Tin NaturalWhite 	200nm TiO_2 35% & Silica 65%	none	5



Instant Whitening for Skin Care

Whitening needs time

It takes significant time for customers to see the real whitening effect

How to convince your users to continue to apply regularly to finally see the real whitening effect?



Instant Whitening
agent can provide
immediate and visible
whitening PERCEPTION



Instant Whitening
reinforces consumer
perception of product
working

To see is To Believe

Instant Whitening effect Whitening Cream

2016_Ricotta Cheese like Whitening Cream_Ver1.0

Phase	Trade Name	%
A	DI-WATER	76.27
	Aristoflex AVC	0.18
	Hydrovance	2.10
	Arbutin	2.00
B	Simulgel EG	2.10
C	DC 345	6.30
	1,3 Propanediol	1.05
D	1,3 B.G	2.50
	SUNSIL-TinNaturalwhite	1.70
E	SNOW Ricotta	5.80

Whitening Agent

Instant
Whitening Agent

SUNSIL-TinNaturalWhite

provides good coverage of skin imperfections while retaining a generally natural appearance, e.g., without unacceptable skin whitening as TiO_2 is predispersed inside silica bead for

- immediate visual improvement in skin appearance.
- desirable coverage of skin imperfections such as pores and uneven skin tone, while maintaining a natural skin appearance (e.g., without unacceptable skin whitening).
- regulating skin appearance and/or condition, especially regulating textural or tonal discontinuities in skin (e.g., pores, fine lines, wrinkles, uneven skin color).



Approved by ECOCERT, natural
origin Instant whitening agent