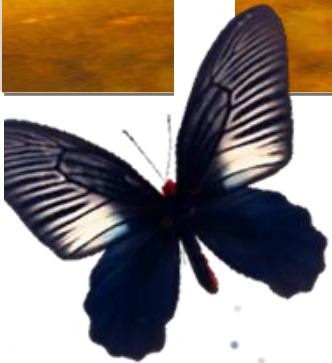




Creation of Quality Value



Creation of Quality Value

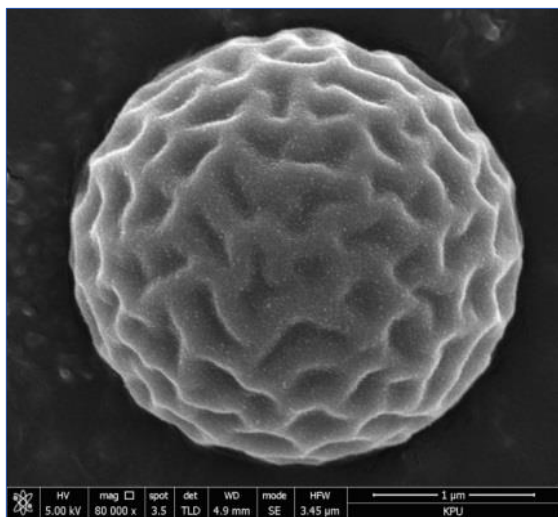


New Launch of Twinone Series (PS-2000 & CS-3000)

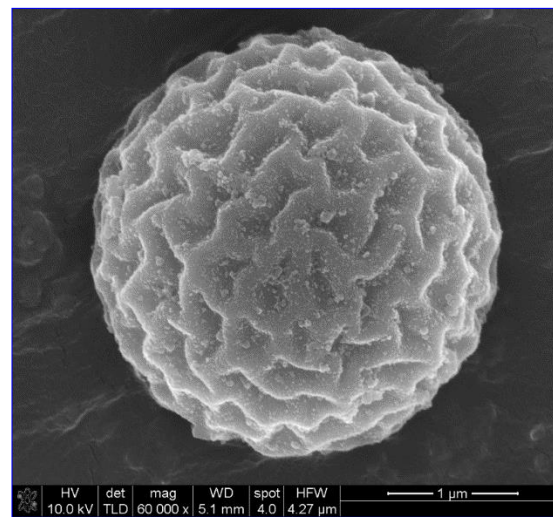
Distributed By –

UMC Ingredients
160 Chubb Ave., Ste. 206
Lyndhurst, NJ 07071
(201) 896-8666

Wrinkle-Shaped Premium Silica Powder



PS-2000



CS-3000

Brand Name : Twinone
Product Name : Twinone PS-2000
Product Code : PS-2000
INCI : Silica

Brand Name : Twinone
Product Name : Twinone CS-3000
Product Code : CS-3000
INCI : Silica & Triethoxycaprylsilane

* **CS-3000** : Triethoxycaprylsilane coated PS-2000

Key features of PS-2000

1

Mineral Origin Silica Powder
Eco-friendly & Environmental issue free
Possible for micro-plastic replacement

2

Soft Focus Effect
Excellent light scattering thanks to unique surface

3

Excellent Sensory Texture
Silky & Natural Mattifying feel with ball bearing effect

4

Elasticity
Good elasticity by crushing test

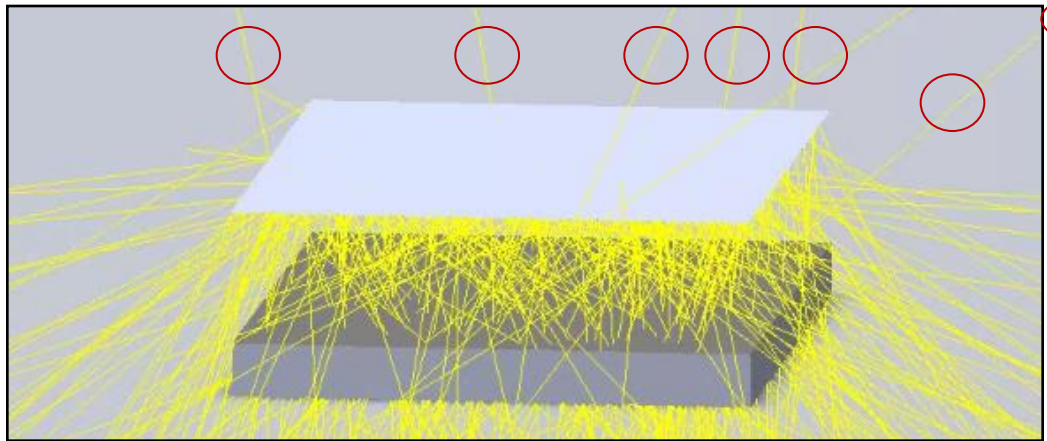
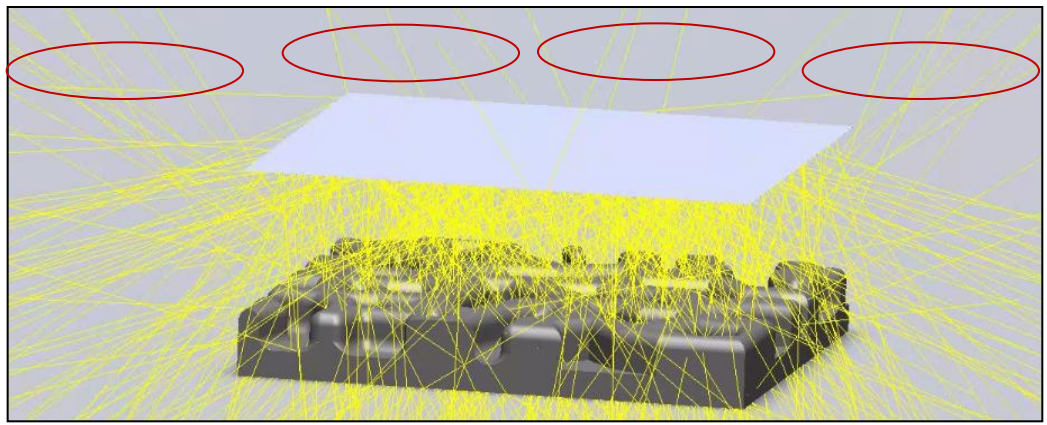
1. Main properties

Comparison data vs conventional silica

Item	PS-2000 / CS-3000	Conventional silica
Particle shape	Wrinkle-shaped spherical powder	Spherical powder
Skin texture	Soft & Smooth	Hard
Soft focus effect	Excellent	Low
Particle breakage (under high pressure)	Non breakage	Breakage in various parts

* **CS-3000** : Triethoxycaprylsilane coated PS-2000 (Silica)

2. Soft focus effect_Optical simulation



Scattered light

The picture of optical simulation shows that PS-2000 has an excellent property of light scattering than conventional silica.

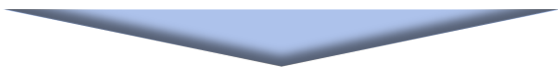
2. Soft focus effect_Hazemeter

Measuring equipment

- Equipment name: Hazemeter
- Manufacturer: Nippon Denshoku (Japan)
- Model name: NDH-5000

Description	HAZE*	T.T (Total transmittance)	D.T (Diffusion transmittance)
PS-2000	81.07	88.31	71.59
Conventional Silica	69.61	85.34	59.41

*Haze = D.T / T.T * 100

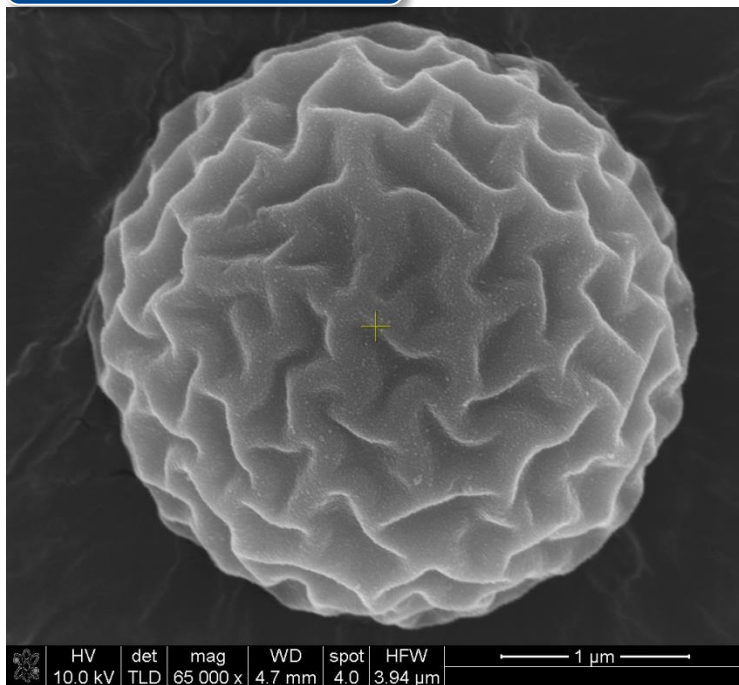


The **haze value table** shows that **PS-2000** has a better soft focus effect and **transparency** than conventional silica.

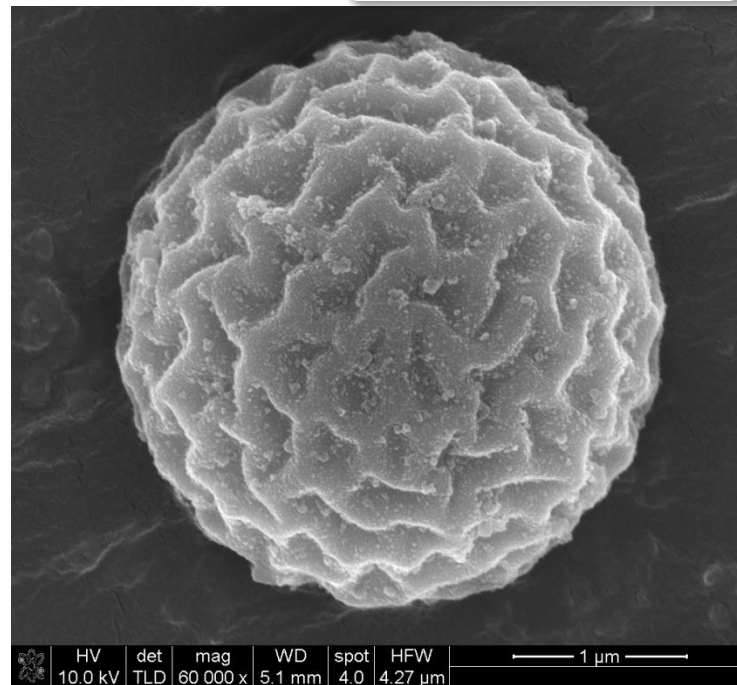
3. Excellent sensory effect

SEM image

PS-2000



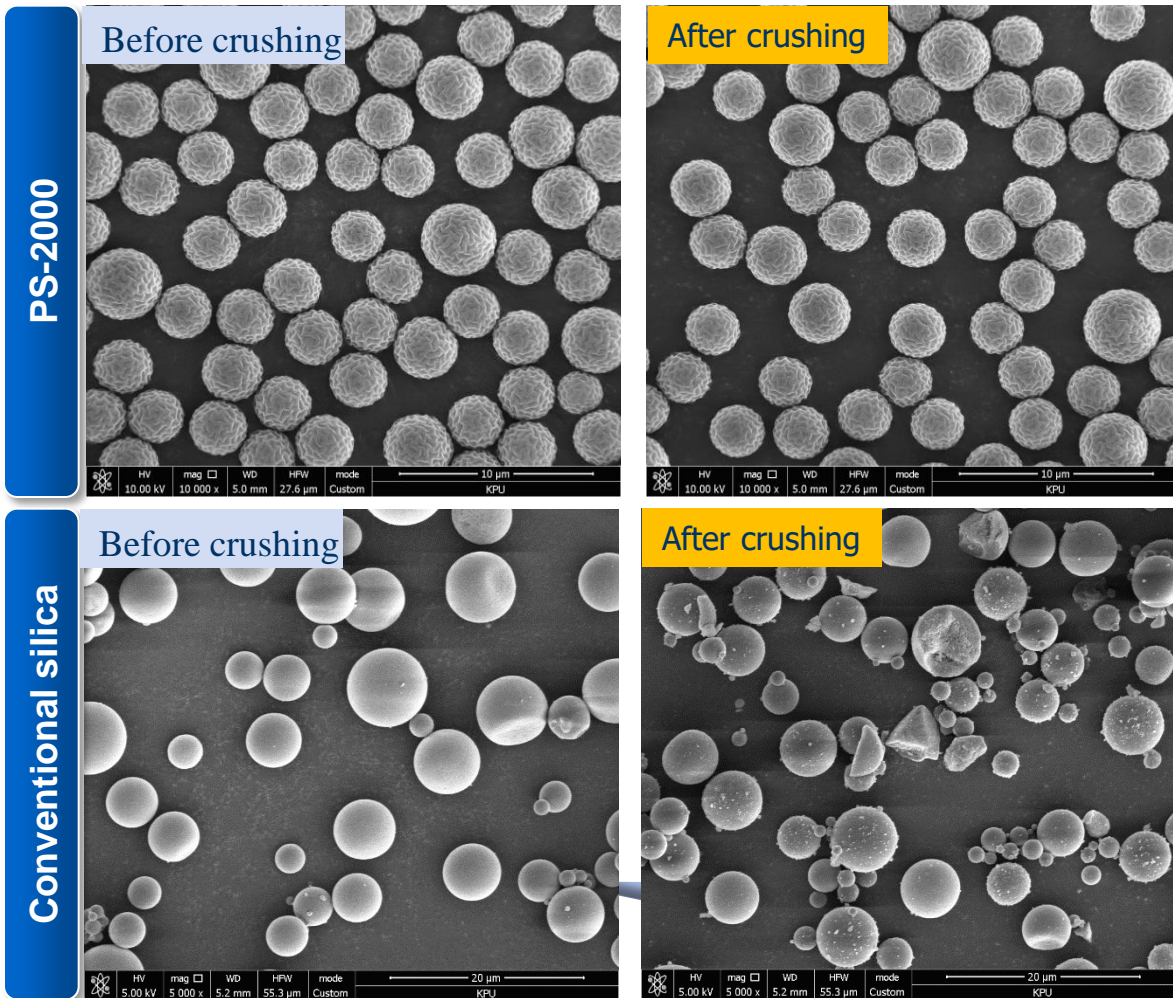
CS-3000



* CS-3000 : Triethoxycaprylsilane coated PS-2000

Embossing effect caused by wrinkle-shaped surface
makes skin texture much better.

4. Particle breakage



Excellent elasticity

makes formulation safe.



- Broken particles in cosmetic product may cause skin scratch.

5. Heavy metal result / PSD



Test Report No. F690101/LF-CTSAYHA22-08620

Issued Date : 2022. 05. 27

Page 2 of 3

Sample No. : AYHA22-08620.001
Sample Description : WS-003(22D27)
Item No./Part No. : N/A
Materials : Silica

Heavy Metals

Test Items	Unit	Test Method	MDL	Results
Lead (Pb)	mg/kg	With reference to EPA 3052 : 1996, EPA 6010D : 2018, by ICP-OES	5	N.D.
Mercury (Hg)	mg/kg	With reference to EPA 3052 : 1996, EPA 6010D : 2018, by ICP-OES	2	N.D.
Cadmium (Cd)	mg/kg	With reference to EPA 3052 : 1996, EPA 6010D : 2018, by ICP-OES	0.5	N.D.

Total Metals

Test Items	Unit	Test Method	MDL	Results
Arsenic (As)	mg/kg	With reference to EPA 3052 : 1996, EPA 6010D : 2018, by ICP-OES	10	N.D.
Antimony (Sb)	mg/kg	With reference to EPA 3052 : 1996, EPA 6010D : 2018, by ICP-OES	10	N.D.
Barium (Ba)	mg/kg	With reference to EPA 3052 : 1996, EPA 6010D : 2018, by ICP-OES	5	N.D.
Copper (Cu)	mg/kg	With reference to EPA 3052 : 1996, EPA 6010D : 2018, by ICP-OES	5	N.D.
Chromium (Cr)	mg/kg	With reference to EPA 3052 : 1996, EPA 6010D : 2018, by ICP-OES	5	N.D.
Nickel (Ni)	mg/kg	With reference to EPA 3052 : 1996, EPA 6010D : 2018, by ICP-OES	5	N.D.
Zinc (Zn)	mg/kg	With reference to EPA 3052 : 1996, EPA 6010D : 2018, by ICP-OES	5	N.D.

NOTE: (1) N.D. = Not detected. (<MDL)
 (2) mg/kg = ppm, ug/kg = ppb, mg/L = ppm
 (3) MDL = Method Detection Limit
 (4) - = No regulation
 (5) ** = Qualitative analysis (No Unit)
 (6) Negative = Undetectable / Positive = Detectable
 (7) The results shown in this test report refer only to the sample(s) tested unless otherwise stated.
 This test report is not related to Korea Laboratory Accreditation Scheme.

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CQP-7081-F01 (01)

SGS Korea Co., Ltd. 322, The G valley, 76, LS-ro, Dongan-gu, Anju-si, Gyeonggi-do, Korea 14117

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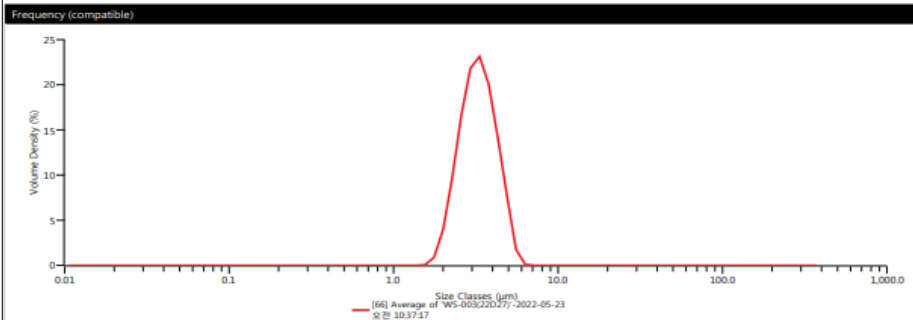
Member of the SGS Group (Société Générale de Surveillance)

Analysis



Measurement Details	Measurement Details
Sample Name Average of WS-003(22D27) SOP File Name HydroMV.cfg Operator Name MS3000	Analysis Date Time 2022-05-23 오전 10:37:17 Result Source Averaged Software Version 3.40.1509.210

Analysis	Result
Particle Name Silica (RI 1.45, AI 0.1) Particle Refractive Index 1.450 Particle Absorption Index 0.100 Dispersant Name Water Dispersant Refractive Index 1.330 Scattering Model Mie Analysis Model General Purpose Laser Obscuration 5.98 % Weighted Residual 2.37 %	Span 0.649 D [3,2] 3.15 µm D [4,3] 3.34 µm Dv [1,0] 2.36 µm Dv [5,0] 3.25 µm Dv [90] 4.47 µm Mode 3.24 µm



Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
Size (µm)	% Volume In	Size (µm)	% Volume In	Size (µm)	% Volume In	Size (µm)	% Volume In	Size (µm)	% Volume In	Size (µm)	% Volume In	Size (µm)	% Volume In	Size (µm)	% Volume In
0.0030	0.00	0.0036	0.00	0.0276	0.00	1.45	0.00	7.64	0.00	40.1	0.00	211	0.00	1120	0.00
0.0114	0.00	0.0597	0.00	0.314	0.00	1.65	0.16	8.68	0.00	41.6	0.00	240	0.00	1240	0.00
0.0329	0.00	0.2679	0.00	0.157	0.00	1.88	3.67	9.86	0.00	51.8	0.00	272	0.00	1430	0.00
0.0547	0.00	0.0771	0.00	0.405	0.00	2.13	7.97	11.2	0.00	58.9	0.00	310	0.00	1630	0.00
0.0547	0.00	0.0876	0.00	0.440	0.00	2.42	13.93	12.7	0.00	64.9	0.00	352	0.00	1850	0.00
0.0586	0.00	0.0995	0.00	0.521	0.00	2.75	38.46	14.5	0.00	74.0	0.00	400	0.00	2100	0.00
0.0215	0.00	0.1113	0.00	0.594	0.00	3.12	35.58	16.4	0.00	86.4	0.00	454	0.00	2390	0.00
0.0244	0.00	0.128	0.00	0.675	0.00	3.55	36.92	18.7	0.00	98.1	0.00	516	0.00	2720	0.00
0.0278	0.00	0.146	0.00	0.767	0.00	4.03	11.86	21.2	0.00	111	0.00	586	0.00	3090	0.00
0.0315	0.00	0.166	0.00	0.872	0.00	4.58	6.48	24.1	0.00	127	0.00	666	0.00	3500	0.00
0.0358	0.00	0.188	0.00	0.991	0.00	5.21	1.11	27.4	0.00	144	0.00	756	0.00		
0.0407	0.00	0.214	0.00	1.13	0.00	5.92	0.00	31.1	0.00	163	0.00	859	0.00		
0.0463	0.00	0.243	0.00	1.28	0.00	6.72	0.00	35.3	0.00	186	0.00	976	0.00		

6. Specification & Applications

Product Name : PS-2000

INCI Name : Silica

CAS NO. : 7631-86-9

Product Name : CS-3000

INCI Name : Silica & Triethoxycaprylsilane

CAS NO. : 7631-86-9 & 2943-75-1

ITEMS		SPEC.	TEST METHOD
Appearance		Spherical white powder	SEM
Particle size (D50)		2.0 ~ 5.0 μm	Particle size analyzer
Loss on Drying		2.0% Max.	130°C, 2hrs
Oil absorption		60 ~ 80g/100g	ASTM D 1484-95
pH		6.0 ~ 9.0	10% in distilled water
Heavy Metals	Pb	5 ppm max.	EPA 3052
	As	2 ppm max.	
	Hg	1 ppm max.	
	Sb	1 ppm max.	
	Cd	1 ppm max.	
	Ni	10 ppm max.	

ITEMS		SPEC.	TEST METHOD
Appearance		Spherical white powder	SEM
Particle size (D50)		2.0 ~ 5.0 μm	Particle size analyzer
Loss on Drying		2.0% Max.	130°C, 2hrs
Oil absorption		60 ~ 80g/100g	ASTM D 1484-95
pH		5.0 ~ 8.0	10% in distilled water
Heavy Metals	Pb	5 ppm max.	EPA 3052
	As	2 ppm max.	
	Hg	1 ppm max.	
	Sb	1 ppm max.	
	Cd	1 ppm max.	
	Ni	10 ppm max.	

Applications

All kinds of cosmetic applications.





“Thank You !”