

# Company Introduction

*Version 3.2*



For more information

Website : [www.luxonkorea.co.kr](http://www.luxonkorea.co.kr)

E-Mail : [sales01@luxonkorea.co.kr](mailto:sales01@luxonkorea.co.kr)

Office telephone: +82-31-943-7751

Cellular Phone: +82-10-9869-7751

## COMPANY INTRODUCTION & HISTORY



- Luxon's history has begun with its corporate philosophy "**Shining light on** esthetic self-realization through material science respecting human nature" expressed in our company logo and also fully contained with memorable moments inspiring to our customers and global cosmetic industry.
- Since the establishment in **2005**, we've achieved remarkable growth records in **the competitive market**.  
Those results might be elusive for general manufacturer but Luxon has brought the scheme to a successful issue by supplying our productions embodied the above-mentioned company spirit.
- Based on these success, Luxon would like to consistently propel to materialize our founding spirit through our material science for health protection and green supply chain practice.
- Our products have utilized **eco-friendly raw materials**, advanced nanoscience and are also proved its excellency through relative certificates.
- Luxon's value management and all products' real worth have been recognized from global renowned customers and partners.
- Luxon will do our best to supply steadily these creative products to customers with **outstanding quality**, also take a leading role and responsibility for ethical management and environ politics.



# 1. COMPANY INTRODUCTION & HISTORY



**2023** “EMBO Silica & ELASTA HSP101” new product development completed

**2022** Successful Production of “WATER Powder LX Series”

**2021** Successful Production of “ELASTA SP101”

**2020** Completed development of plastic replacement materials “ECO Series & SPHESTA MD7 AM”

**2019** KOREA excellent patent award  
“A spherical zinc oxide powder coated with natural materials, manufacturing method thereof and cosmetic comprising the same”

**2018** Building Zinc Oxide Powder production line

**2017** And Transfer to the factory of Paju city

**2016** Method for preparing rosin ester composition, rosin ester composition and cosmetic composition comprising the rosin ester composition.  
Application for the patent of rosin ester  
Advance into overseas market(**Indonesia,Turkey,Thailand,France,Italy etc.**)

**2015** Obtain a Venture capital enterprise certification  
  
Establish Luxon Fine Chemical Co.,Ltd  
(**Shanghai Branch**)

**2014** Obtain a Qualification of **Research Institute** for enterprise  
  
Obtain Several Patents  
Obtain **ISO9001/ISO14001**

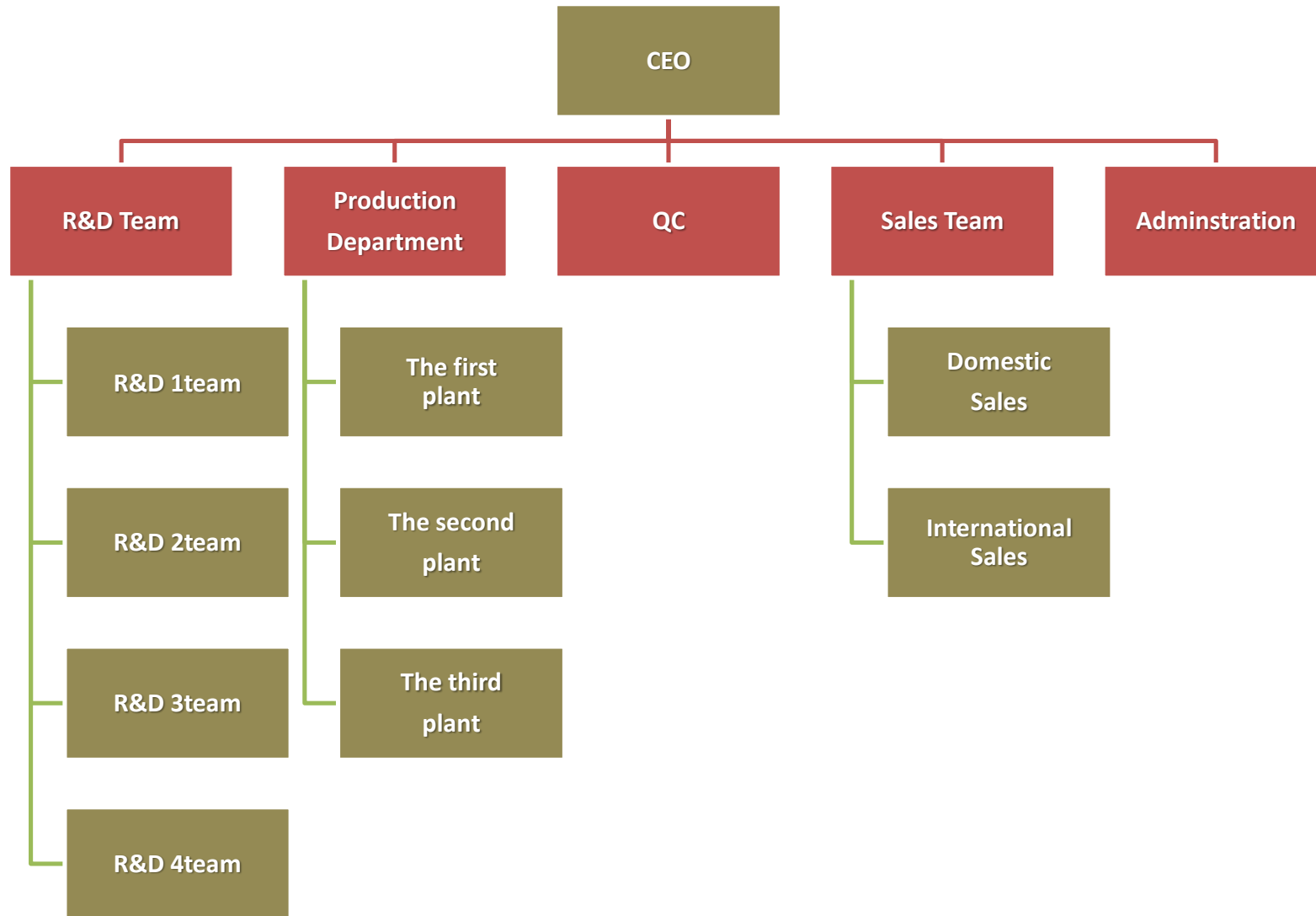
**2009** Established the 2<sup>nd</sup> factory in **HuZhou city, China** and start the surface coating production line

**2008** Successfully developed technology of producing silica powder in **Korea factory**

**2007** Established the 1<sup>st</sup> powder & coating factory and successfully developed special G.D.R surface coating system in **Gimpo city of Korea**

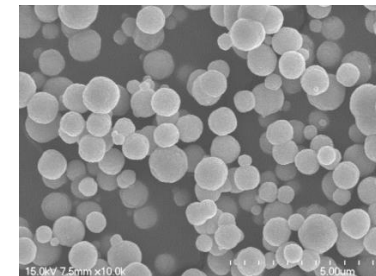
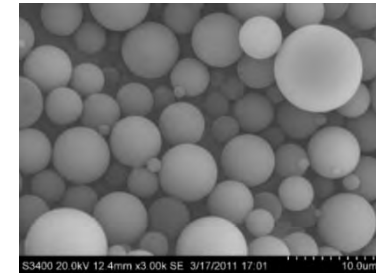
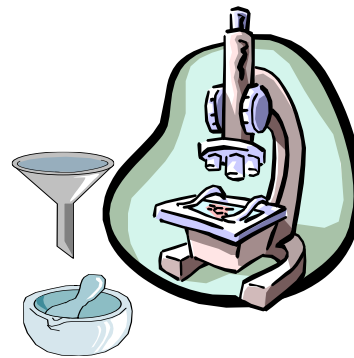
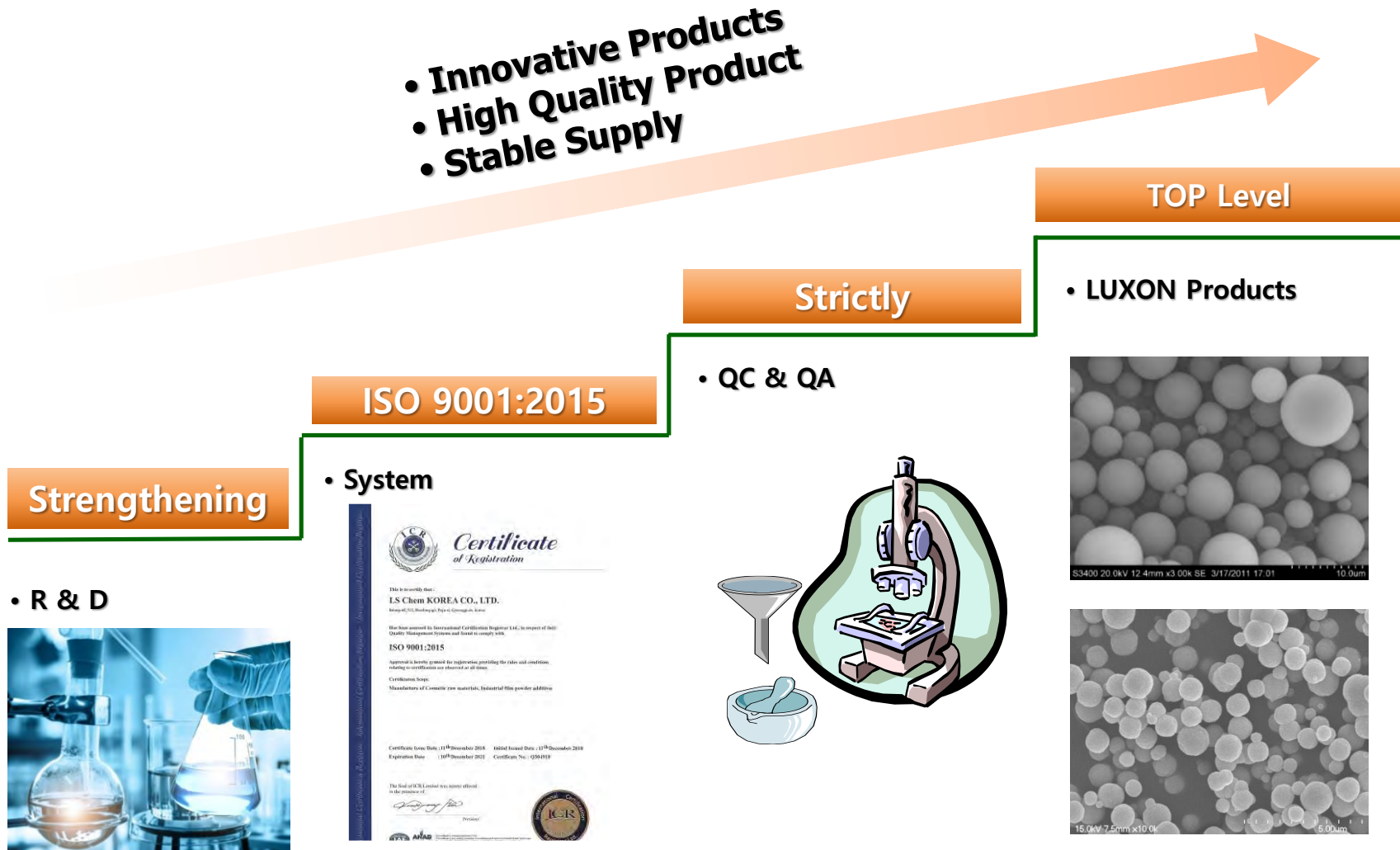
**2005** Established **Luxon Chemical Korea Trade Company**

## 2. Organization chart, Flow Chart Our Product, R&D



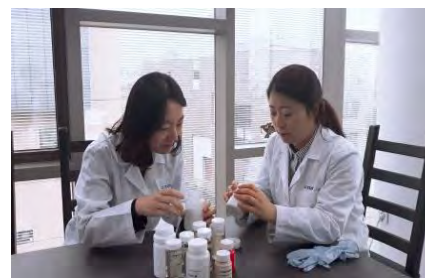
## 2. Organization chart, Flow Chart Our Product, R&D

- Innovative Products
- High Quality Product
- Stable Supply





## 2. Organization chart, Flow Chart Our Product, R&D

### Research Activities



### Patent Pending

Domestic, Foreign	Patent name	Application Number Patent Number	Date
Domestic	Method for preparing <b>rosin ester</b> composition, rosin ester composition and cosmetic composition comprising the rosin ester composition	10-2016-0056640 10-1868052	2016.05.09 2018.06.08
Domestic	A powder surface coating method using Gravity Drop Rotation <b>coating system</b>	10-2017-0172013	2017.12.14
Domestic	Porous sphere type <b>zinc oxide powder</b> , manufacturing method thereof and cosmetic composition comprising the same	10-2018-0154085 10-20347830000	2018.12.04 2019.10.22
Domestic	<b>A spherical zinc oxide powder</b> coated with natural materials, manufacturing method thereof and cosmetic comprising the same	10-2018-0171350 10-1994980	2018.12.27 2019.06.25
China		CN110613625B ZL201911059904.0	2019.11.01
 Domestic	<b>Inorganic powder with enhanced hydrophobicity</b> , manufacturing method thereof and cosmetic comprising the same	10-2020-0075958 1023706900000	2020.06.22 2022.02.28
 Domestic	<b>Inorganic powder with enhanced hydrophobicity</b> , manufacturing method thereof and cosmetic comprising the same	10-2022-0026190 102408850	2022.02.28 2022.06.09

## 2. Organization chart, Flow Chart Our Product, R&D



### Luxon Test Method

<b>NO</b>	<b>TEST Method</b>
LXTM-001	Residual organic material
LXTM-002	Loss on drying
LXTM-003	Oil absorption
LXTM-004	PH Test
LXTM-005	Particle size distribution ( Marlvern Master sizer )
LXTM-006	Loss on ignition
LXTM-007	Hydrophobicity
LXTM-008	Electric conductivity
LXTM-009	Thickener compatibility test
LXTM-010	Acid value
LXTM-012	Viscosity test
LXTM-013	Refractive index
LXTM-014	Color measurement
LXTM-016	Particle size distribution ( Beckman coulter )

# Spherical Powders Technology

*Version 3.2*



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# Spherical Silica Powder



## Silica Series

	Trade Name	INCI NAME	Character
Silica	SILIA LX3	Silica	D50 : 1.5 ~ 4.5 um    OA : 110 ~ 150
	SILIA LX7	Silica	D50 : 7.0 ~ 11.0 um    OA : 130 ~ 180
	SILIA LX13	Silica	D50 : 10.0 ~ 15.0 um    OA : 130 ~ 180
	SPHESTA SB606	Silica	D50 : 4.5 ~ 7.5 um    OA : 40 ~ 90
	SPHESTA SB609	Silica	D50 : 5.0 ~ 8.0 um    OA : 60 ~ 100
	SPHESTA MD6	Silica	D50 : 5.0 ~ 8.0 um    OA : 90 ~ 130
	SPHESTA MD7	Silica	D50 : 5.0 ~ 8.0 um    OA : 90 ~ 130
	SPHESTA HS10	Silica	D50 : 8.0 ~ 15.0 um    OA : 230 ~ 270
	LX TIS - 35	Silica & TiO2	D50 : 5.0 ~ 10.0 um    OA : 90 ~ 130

## Coated Silica Series

	Trade Name	INCI NAME	Character
Coated Silica	SILIA LX7 ASM	Silica & Triethoxycaprylylsilane	D50 : 7.0 ~ 11.0 um
	SPHESTA MD7 AM	Silica & Lauroyl Lysin	D50 : 5.0 ~ 9.0 um    OA : 80 ~ 120
	SPHESTA MD6 ASM	Silica & Triethoxycaprylylsilane	D50 : 5.0 ~ 8.0 um
	SPHESTA MD6 MSM	Silica & Methicone	D50 : 5.0 ~ 8.0 um
	SPHESTA MD6 DSM	Silica & Dimethicone	D50 : 5.0 ~ 8.0 um
	SPHESTA ECO 3	Silica & Lauryl Alcohol & Cetyl Alcohol	D50 : 1.5 ~ 4.5 um    OA : 50 ~ 90
	SPHESTA ECO 7	Silica & Lauryl Alcohol & Cetyl Alcohol	D50 : 7.0 ~ 11 um    OA : 50 ~ 90
	SPHESTA ECO H10	Silica & Lauryl Alcohol & Cetyl Alcohol	D50 : 10.0 ~ 15.0 um    OA : 170 ~ 210
	PHILICSTA MD7	Silica & Phytic Acid	D50 : 5.0 ~ 9.0 um    OA : 50 ~ 90
	Water Powder LX7	Silica & Poly methyl silsequioxane	D50 : 5.0 ~ 9.0 um    OA : 60 ~ 140
	LX TIS - 35 AS	Silica & TiO2 & Triethoxycaprylylsilane	D50 : 5.0 ~ 10.0 um    OA : 80 ~ 120
 EMBO SILICA	Silica & Poly methyl silsequioxane	D50 : 5.0 ~ 11.0 um    OA : 60 ~ 140	

# Spherical Polymer Powder



## Polymer Series

	Trade Name	INCI NAME	Character
PMMA	LX PMMA PR7	Poly methyl methacrylate	D50 : 5.0 ~ 9.0 um    OA : 30 ~ 70
PMSQ	LX PMSQ P50	Poly methyl silsequioxane	D50 : 5.0 um    OA : 40 ~ 60
PMSQ	LX PMSQ P100	Poly methyl silsequioxane	D50 : 10.0 um    OA : 40 ~ 60

## Silicon Powder

	Trade Name	INCI NAME	Character
Silicon Powder	ELASTA SP101	Vinyl Dimethicone / Methicone Silsesquioxane Crosspolymer	D50 : 8.0 ~ 15.0 um    OA : 60 ~ 100
	<b>NEW</b> ELASTA HSP101	Vinyl Dimethicone / Methicone Silsesquioxane Crosspolymer	D50 : 8.0 ~ 15.0 um    OA : 60 ~ 100

## Zinc Oxide Powder

	Trade Name	INCI NAME	Character
ZnO	SS-2000	Zinc Oxide & Triethoxycarylylsilane	D50 : 1.0 ~ 3.0 um

# Silica (Non Coated, Coated)

# Spherical Silica Powder



## Spherical Porous Silica powder

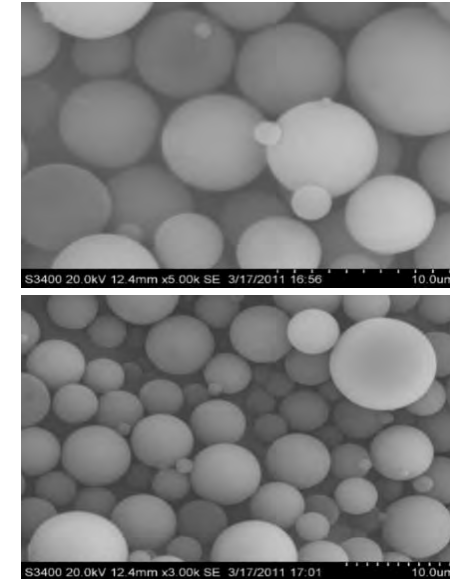
- High Purity
- Sebum Control
- Semi-transparent
- Soft focus effect
- Smooth feeling
- EU REACH



Ecocert



COSMOS APPROVED



### COSMOS-standard Definition

- **PPAI** = **Physically** Processed Agro-Ingredient / Agro-Ingrédient **Physiquement** Transformé
- **CPAI** = **Chemically** Processed Agro-Ingredient / Agro-Ingrédient **Chimiquement** Transformé
- **SyMo** = Synthetic Moieties / Greffons Synthétiques
- **NNI** = **Non Natural** Ingredient / Ingrédients **Non Naturels**

• \* = concerned by appendices II and/or V

Number of Raw Materials found / Nombre de Matières Premières trouvées : 1

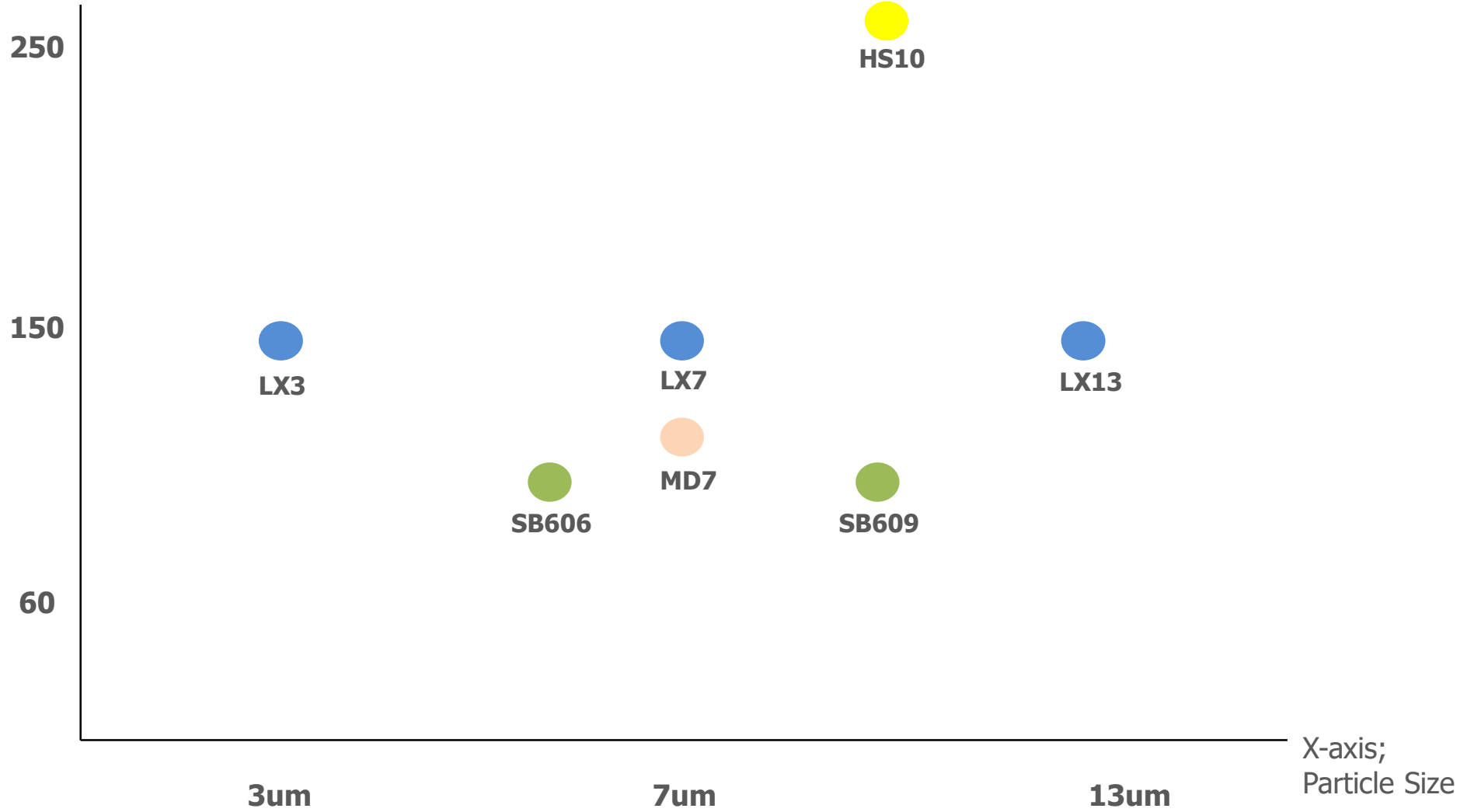
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COMMERCIAL NAME / NOM COMMERCIAL	INCI	FUNCTION	COSMOS-standard PPAI	COSMOS-standard CPAI	COSMOS-standard SyMo	COSMOS-standard NNI	COSMOS-standard Restriction	COMPANY / SOCIETE	APPROVED BY
SILIA	silica								
SILIA/SPHESTA	Silica	Smoothness function in compact powder	0	0	0	0		LS CHEM KOREA CO.,LTD.	ECOCERT

# User Guideline of SHPESTA, SILIA Series, Non coating silica

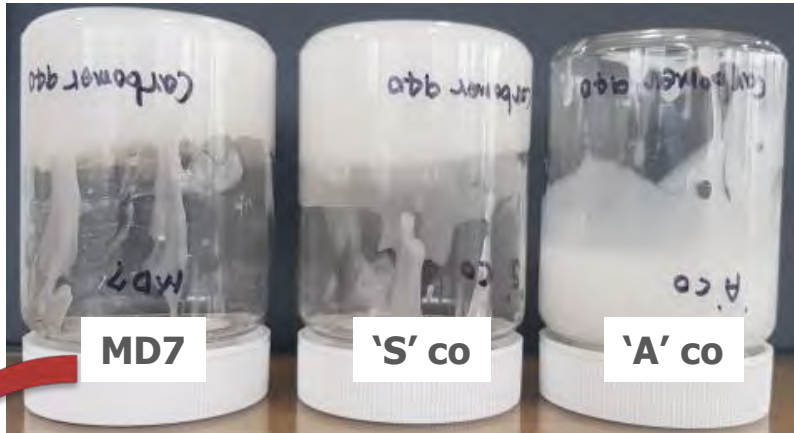


Y-axis;  
Oil Absorption

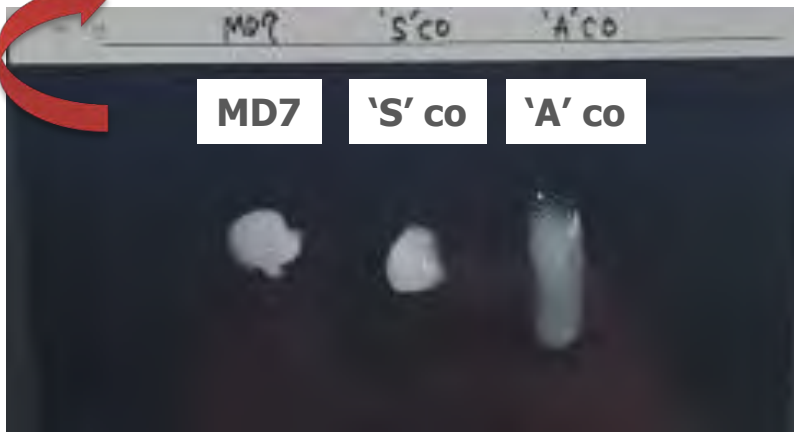


# Thickener compatibility TEST Carbopol 940

## TEST Results



**Excellent**  
Thickener Compatibility



## Analysis recipe

Part	Ingredients	%
A	D.I-Water	76.5
	Carbopol 940 1% sol.	17.0
B	D.I-Water	1.0
	TEA	0.5
C	Powder	5.0

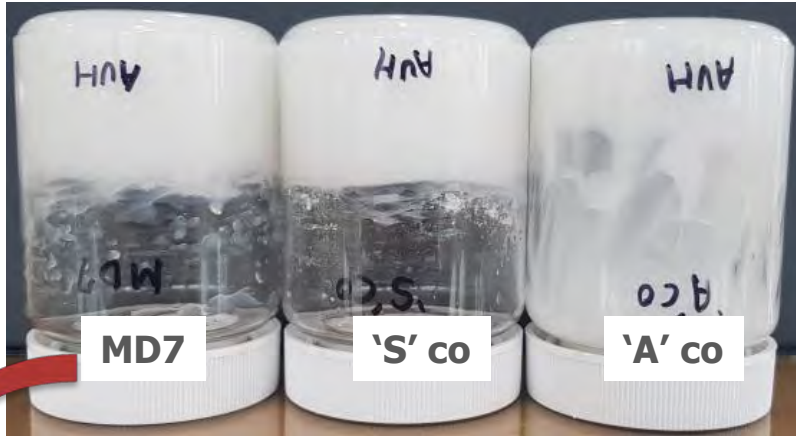
Must proceed to Pure Water.

## TEST Method

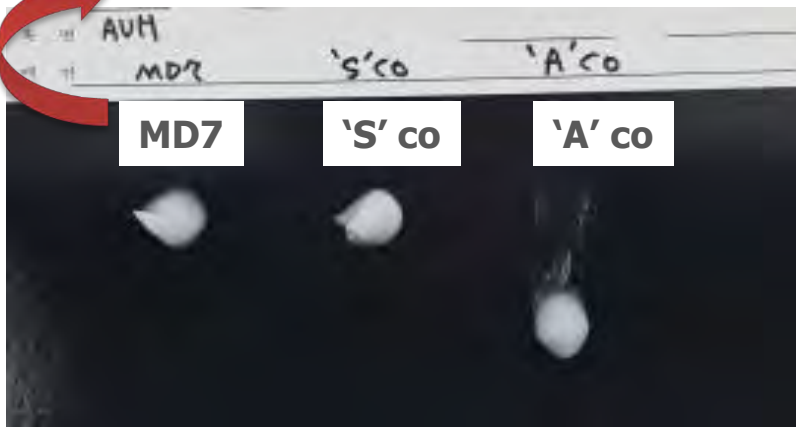
1. Prepare 200ml beaker
2. Carbopol 940 1% solution prepared in advance
3. Manufactured A Phase and prepared for the first time.
4. Manufacture B Phase and put it into A Phase.
5. Manufactured at maximum rpm of stirrer
6. Understand the flowability of the final Phase.

# Thickener compatibility TEST RHEOSOL AVH

## TEST Results



**Excellent**  
Thickener Compatibility



## Analysis recipe

Part	Ingredients	%
A	D.I-Water	94.0
	RHEOSOL AVH	1.0
B	Powder	5.0

Must proceed to Pure Water.

## TEST Method

1. Manufactured A Phase
2. Put B Phase into A Phase.
3. Manufactured at maximum rpm of stirrer
4. Understand the flowability of the final Phase.

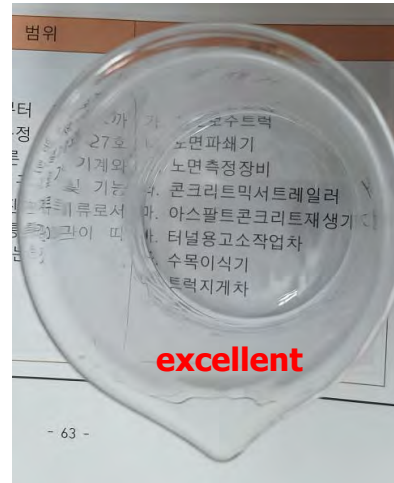
# Transparency Test of Silica



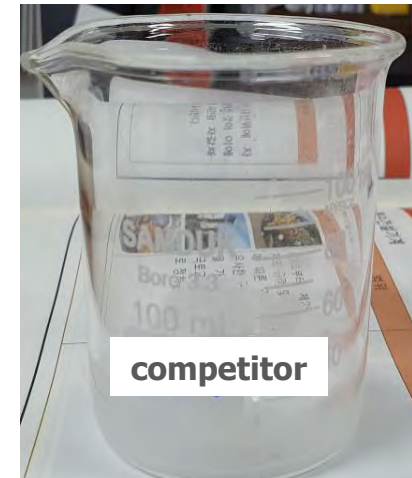
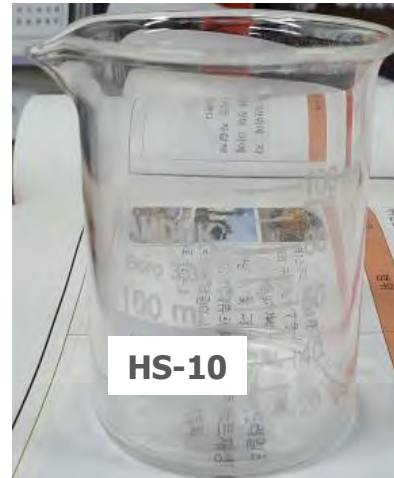
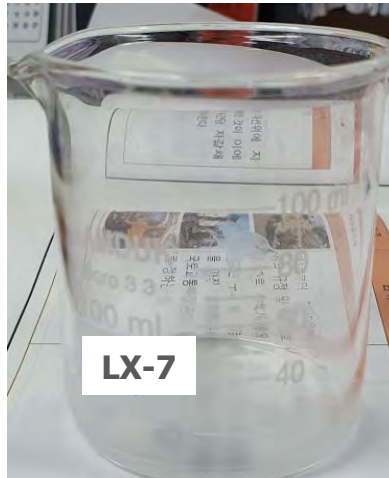
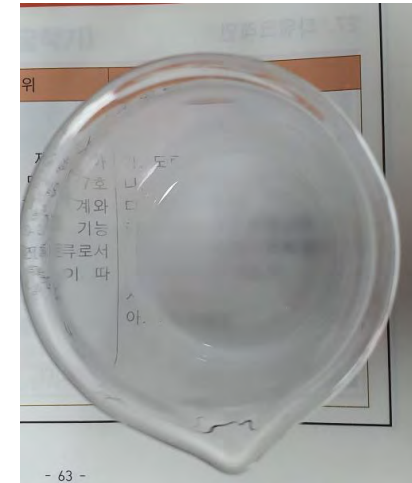
LX-7



HS-10



Competitor



## TEST Method

1. Put Liquid Paraffin 2g in 100ml beaker
2. Put test Powder.
3. Mix the spatula



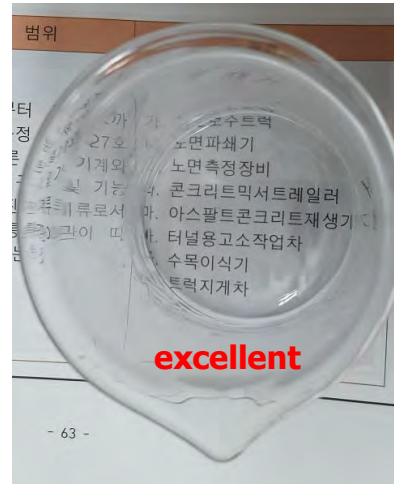
# Transparency Test of Silica



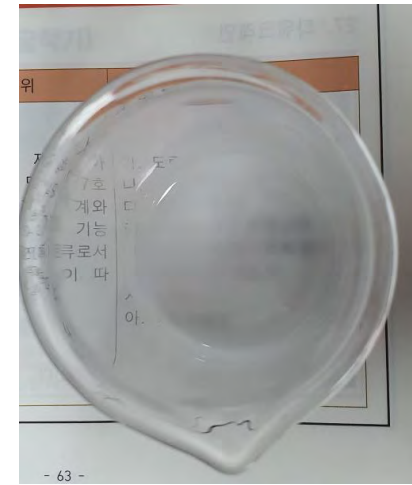
LX-7



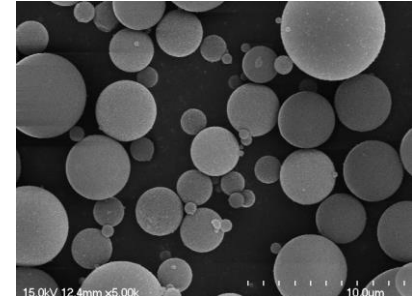
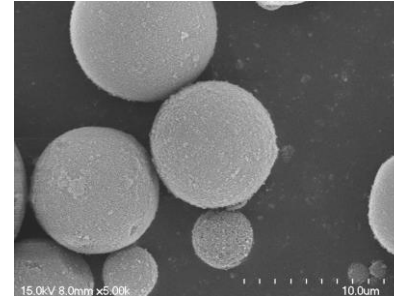
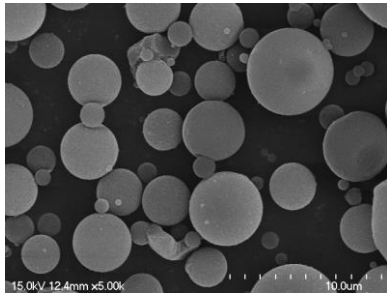
HS-10



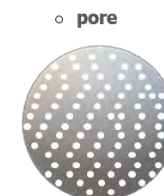
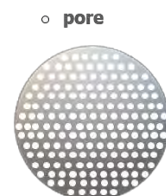
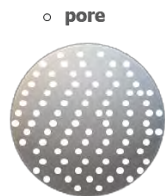
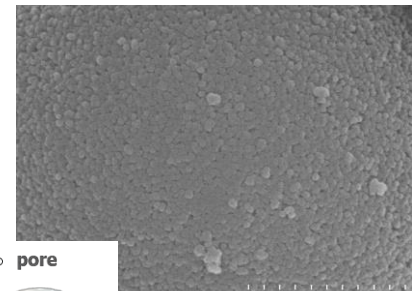
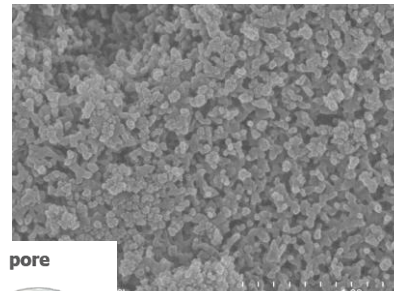
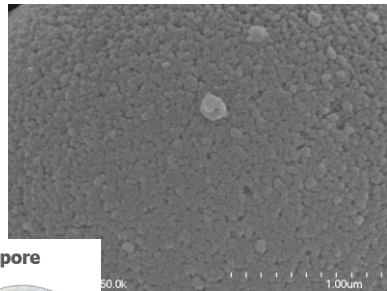
Competitor



X5000



X50000



## Formulation for SEBUM control powder in use SPHESTA (SILIA) Series



Phase	Trade Name	INCI	%
A	<b>SPHESTA MD7</b>	<b>Silica</b>	<b>56.75</b>
	HICOS GTC	Caprylic/Capric Triglyceride	5.00
B	Dry Flo PC	Aluminum Starch Octenylsuccinate	25.00
	ELASTA SP 101	Vinyl Dimethicone/Methicone Silsesquioxane Crosspolymer	10.00
	LX Mica DSM	Mica, Dimethicone	3.00
C	Spectrastat	Caprylhydroxamic Acid/Caprylyl Glycol/Glycerin	0.15
	Perfume		0.10

100.0



### Key Ingredients

**SPHESTA MD7**

LX Mica DSM

ELASTA SP 101



### Ingredient

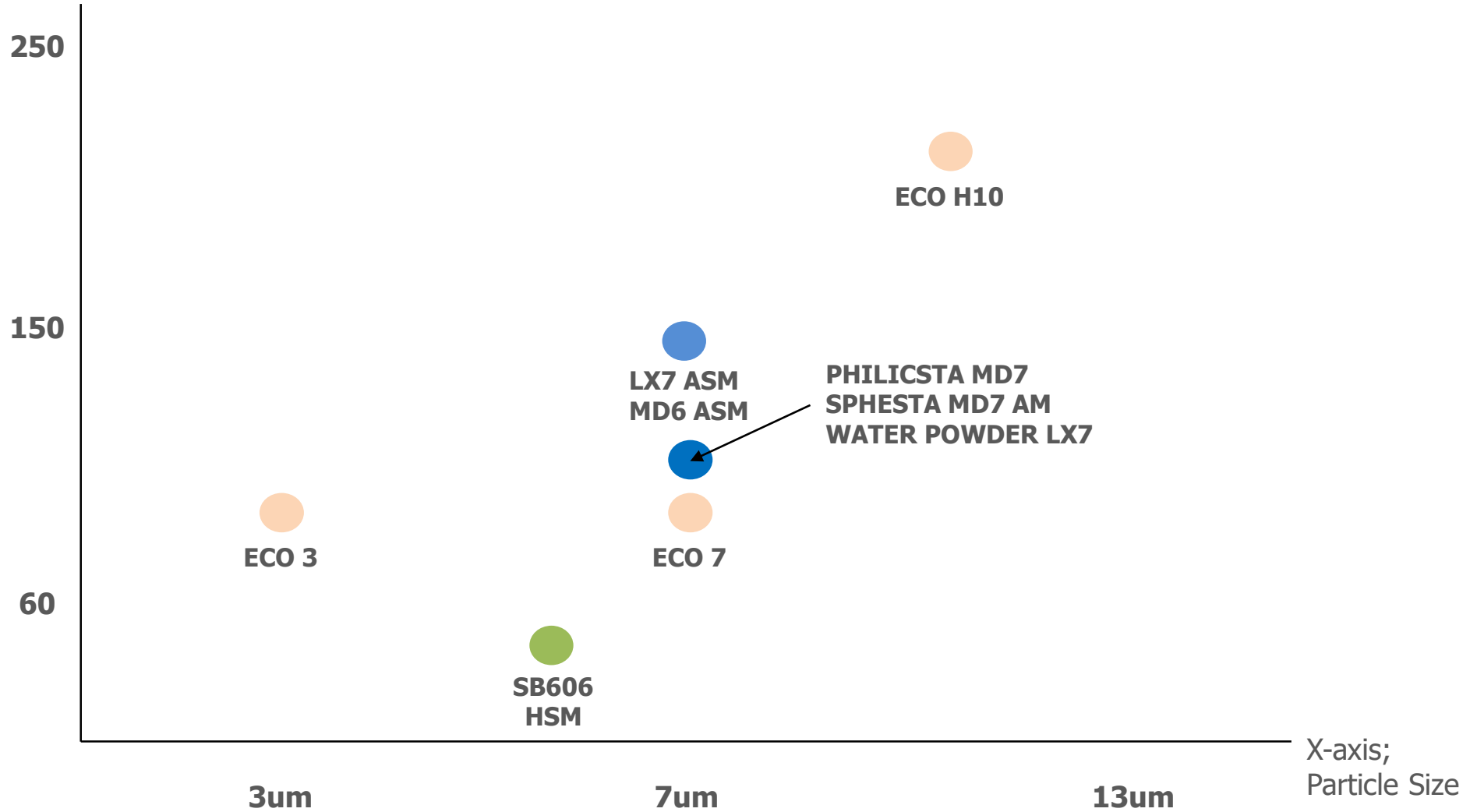
**Silica**, Corn Starch modified, Dimethicone, Vinyl Dimethicone Crosspolymer, Caprylic/Capric Triglyceride, **Mica**, Methicone, Mineral Salts, Camellia Sinensis Leaf Extract, . Mentha Arvensis Leaf Extract  
Ethylhexylglycerin, Glyceryl caprylate, Ethylene/Acrylic Acid Copolymer, 1,2-Hexanediol, Fragrance

# Silica (Coated)

# User Guideline of SHPESTA, SILIA Series, Coated silica



Y-axis;  
Oil Absorption



# Microbeads Issue

## EU proposes ban on 90% of microplastic pollutants

**European Chemicals Agency draft law aims to cut 400,000 tonnes of plastic pollution**



▲ A marine biologist holds up a sample of seawater containing microplastics. Photograph: Eric Gaillard/Reuters

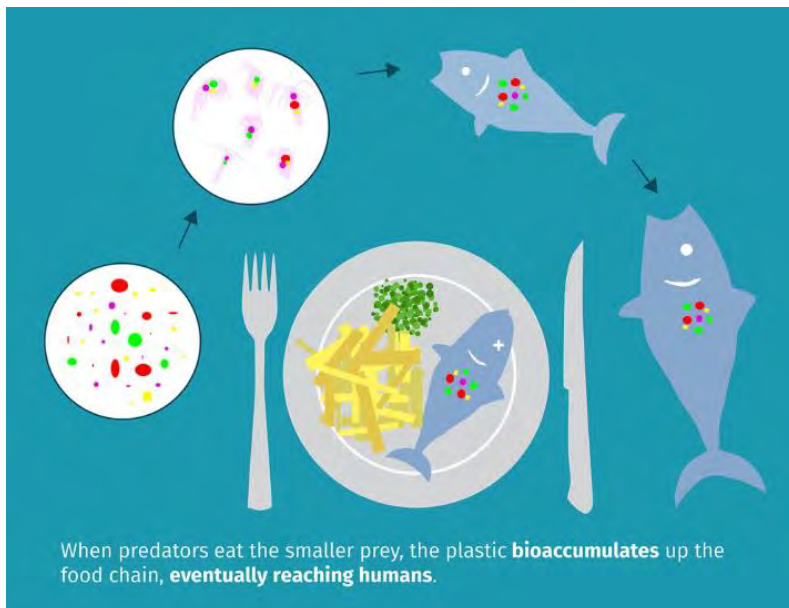
A wide-ranging ban on microplastics covering about 90% of pollutants has been proposed by the EU in an attempt to cut 400,000 tonnes of plastic pollution in 20 years.

Cosmetics, detergents, paints, polish and coatings would all require design overhauls, as would products in the construction, agriculture and fossil fuels sectors.

The draft law targets microplastics that are not necessary but have been added to products by manufacturers for convenience or profit.

Baskut Tuncak, the UN's special rapporteur on hazardous substances and wastes, said: "Microplastics are a growing concern to a number of human rights. The steps proposed by Echa are necessary to help ensure present and future generations can enjoy what is their human right: a clean, healthy and sustainable environment."

# Micro Beads Problems



## IMPACT






SINCE THE BEGINNING OF BEAT THE MICROBEAD, 15 COUNTRIES HAVE TAKEN STEPS TO BAN MICROBEADS.



<https://www.plasticsoupfoundation.org/en/what-we-do/microplastics/beat-the-microbead/>



# Have taken action towards ban on microbeads

State	Sales ban effective date	Scope
 Argentina	29 December 2022	Ban on the import, manufacture and sale of microbeads in cosmetics. <sup>[39]</sup>
 Canada	1 January 2018	Ban on microbeads smaller than 5 mm in size.
 China	31 December 2022	Ban on sale, following a ban on production two years earlier (31 December 2020). <sup>[40]</sup>
 France	1 January 2018	Ban on import, manufacture and sale of microbeads in rinse-off cosmetics. <sup>[41]</sup>
 India	1 January 2020	Ban on microbeads in rinse-off cosmetics. <sup>[42]</sup>
 Ireland	20 February 2020	Ban on microbeads in rinse-off cosmetics. <sup>[43]</sup>
 Italy	1 January 2020	Ban on microbeads in rinse-off cosmetics. <sup>[44][45]</sup>
 Netherlands	End of 2016	Ban on import, manufacture and sale of microbeads in rinse-off cosmetics.
 New Zealand	7 June 2018	Ban on import, manufacture and sale of microbeads in rinse-off cosmetics. <sup>[46]</sup>
 South Korea	1 July 2017	Ban on sale of microbeads in cosmetics. <sup>[47]</sup>
 Sweden	1 January 2019	Ban on sale of microbeads in rinse-off cosmetics, following an earlier ban on import and manufacture (1 July 2018). <sup>[48]</sup>
 Taiwan	1 July 2018	Ban on sale of microbeads in rinse-off cosmetics, following an earlier ban on import and manufacture (1 January 2018). <sup>[49]</sup>
 Thailand	1 January 2020	Ban on import, manufacture and sale of microbeads in rinse-off cosmetics. <sup>[50]</sup>
 United Kingdom	1 October 2018	Ban on the use of microbeads in rinse-off cosmetics and personal care products. England and Scotland (19 June 2018), Wales (30 June 2018), Northern Ireland (1 October 2018).
 United States	1 July 2017	Ban on manufacture of rinse-off cosmetics microbeads at the federal level.

<https://en.m.wikipedia.org/wiki/Microbead>

# Our Proposal



		<b>NEW</b>	<b>NEW</b>	<b>NEW</b>	<b>NEW</b>	<b>NEW</b>
	<b>SPHESTA SB606 HSM</b>	<b>SPHESTA MD7 AM</b>	<b>SPHESTA ECO 3</b>	<b>SPHESTA ECO 7</b>	<b>SPHESTA ECO H10</b>	<b>SS-2000</b>
Type	Spherical powder	Spherical powder	Spherical Powder	Spherical Powder	Spherical Powder	Spherical Powder
Natural & Artificial	Artificial	Natural	Natural	Natural	Natural	Artificial
INCI	Silica & Hydrogen Dimethicone	Silica & Lauroyl Lysin	Silica & Lauryl Alcohol & Cetyl Alcohol	Silica & Lauryl Alcohol & Cetyl Alcohol	Silica & Lauryl Alcohol & Cetyl Alcohol	Zinc Oxide & Triethoxycarylylsilane
CAS. NO	7631-86-9 & 68037-59-2	7631-86-9 & 52315-75-0	7631-86-9 & 112-53-8 & 36653-82-4	7631-86-9 & 112-53-8 & 36653-82-4	7631-86-9 & 112-53-8 & 36653-82-4	1314-13-2 & 2943-75-1
Particle Size (um)	4.5 ~ 7.5	5.0 ~ 9.0	1.5 ~ 4.5	7.0 ~ 11	10.0 ~ 15.0	1.0 ~ 3.0
Oil Absorption	55	80 ~ 120	50 ~ 90	50 ~ 90	170 ~ 210	50 ~ 70
Hydrophobicity [LXTM-007]	3.5 min	2.5 min	3.5 min	3.5 min	3.5 min	3.5 min

# Our Proposal of Glossy Essense (O/W)



Feature **Moist Feeling, Velvety Skin**

Lab No.: HTV01216ES-GL(A01)

PHASE	INGREDIENTS	INCI	%
A	D.I.WATER	Water	TO100
	Glycerin	Glycerin	6.00
	Hyalgan LL	Hyaluronic acid	0.01
	MOILUB 1000	Biosaccharide Gum-1	5.00
	MOILUB 701A	PEG/PPG-17/6 Copolymer	5.00
	TWEEN 60	Polysorbate 60	1.50
A-1	Water	Water	10.00
	Keltrol F	Xanthan gum	0.10
B	LX PMSQ P100	Polymethylsilsesquioxane	3.00
	Nylon	Nylon-12	1.00
	LX MICA (S) ASM	Mica, Triethoxycaprylylsilane	0.50
	DC245	Cyclopentasiloxane	3.50
	Moicos N115	Methyl hydrogenated rosinatate	3.50
	CRODAMOL™ GTCC	Caprylic/Capric Triglyceride	1.00
C	SIMULGEL™ EG	Sodium Acrylate / Sodium Acryloyldimethyl Taurate Copolymer / Isohexadecane / Polysorbate 80	1.50
D	Natureclean RP9	Raspberry Ketone/Propanediol	2.50



## Standard Operating Procedures

1. Heat phase A to 80°C
2. After stirring A-1, put into A phase
3. After stirring phase B, put into phase A  
Homo mix at 3000RPM for 10 min
4. After input of C phase, homo mix at 3000RPM for 5 min
5. Put D-phase at 45°C
- 6 Finish after 35 °C cooling



## Key Ingredients our products

LX PMSQ P100  
LX MICA (S) ASM

### Commend

MOILUB 1000  
MOILUB 701A  
MOICOS N115

Reference : None

# Our Proposal of Glossy Essense (O/W)



Feature **Moist Feeling, Velvety Skin**

Lab No.: HTV01216ES-GL(A02)

PHASE	INGREDIENTS	INCI	%
A	D.I.WATER	Water	TO100
	Glycerin	Glycerin	6.00
	Hyalgan LL	Hyaluronic acid	0.01
	MOILUB 1000	Biosaccharide Gum-1	5.00
	MOILUB 701A	PEG/PPG-17/6 Copolymer	5.00
	TWEEN 60	Polysorbate 60	1.50
A-1	Water	Water	10.00
	Keltrol F	Xanthan gum	0.10
B	LX SS 2000	Zinc Oxide	4.00
	LX MICA (S) ASM	Mica, Triethoxycaprylylsilane	0.50
	DC245	Cyclopentasiloxane	3.50
	Moicos N115	Methyl hydrogenated rosinatate	3.50
	CRODAMOL™ GTCC	Caprylic/Capric Triglyceride	1.00
C	SIMULGEL™ EG	Sodium Acrylate / Sodium Acryloyldimethyl Taurate Copolymer / Isohexadecane / Polysorbate 80	1.50
D	Natureclean RP9	Raspberry Ketone/Propanediol	2.50



## Standard Operating Procedures

1. Heat phase A to 80°C
2. After stirring A-1, put into A phase
3. After stirring phase B, put into phase A  
Homo mix at 3000RPM for 10 min
4. After input of C phase, homo mix at 3000RPM for 5 min
5. Put D-phase at 45°C
- 6 Finish after 35 °C cooling



## Key Ingredients our products

LX SS 2000

Commend

MOILUB 1000

MOILUB 701A

MOICOS N115

Reference : None

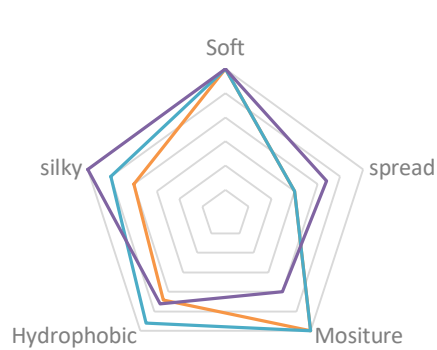
# SB606 HSM & Nylon-12

# SB606 HSM & Nylon-12

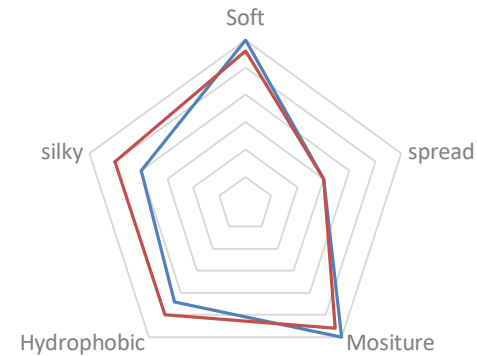


	SPHESTA SB606 HSM	Nylon-12(T co,Ltd)
Type	Spherical powder	Spherical powder
INCI	Silica & Hydrogen Dimethicone	Nylon-12
CAS. NO	7631-86-9 & 68037-59-2	25038-74-8
Particle Size	4.5 ~ 7.5 um	5.0 ~7.0um
Oil Absorption	50 ~ 90	50 ~ 90
Hydrophobicity [LXTM-007]	3.5	5.0

Blind Test 20 person  
( 2018 Jan )



— SB606 HSM — Nylon-12 — LX7 ASM



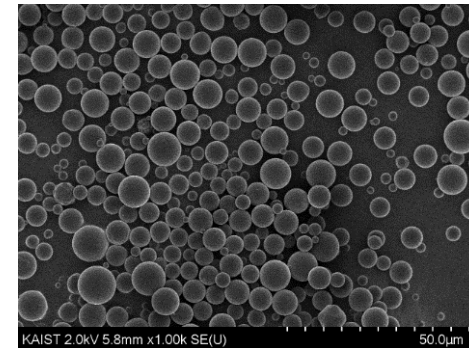
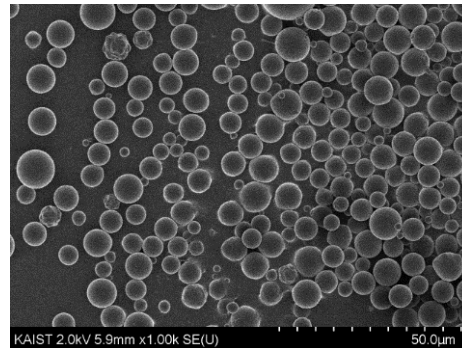
— SB606HSM — PMMA

# SPHESTA SB606HSM\_comparison analysis



	① : SPHESTA SB606 HSM	② : Nylone-12
Manufacturer	LUXON	'S' company
Loss on Drying	0.65%	0.76%
Hydrophobicity	5	5
Median Size (μm)	6.90	7.88
PH	7.30	7.50
Oil Absorption	53	57

SEM



Yellow Index 3.01



Yellow Index 6.12



Heat Resistance  
(130°C 30min)

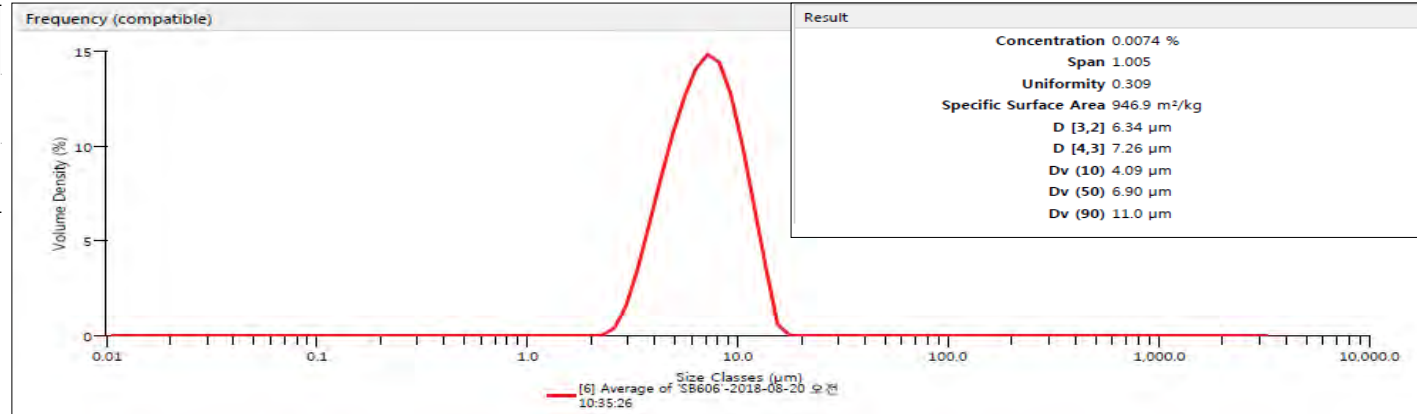
# Comparison Analysis



Analysis equipment : Malvern Instruments 

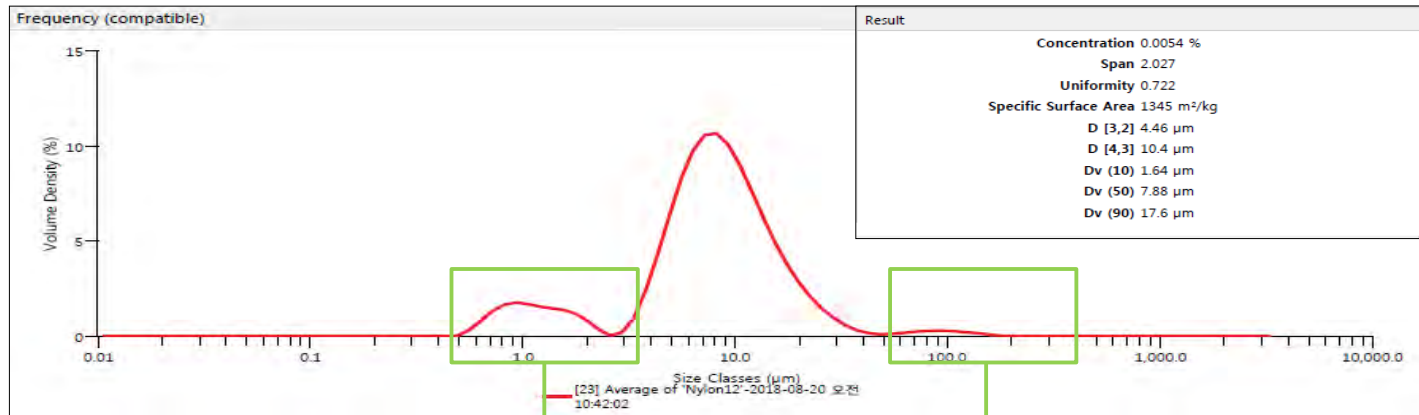
## ① : SPHESTA SB606 HSM (LUXON)

Results	
D50	6.90 $\mu\text{m}$
D90	11.00 $\mu\text{m}$



## ② : Nylone-12 ('S' company)

Results	
D50	7.88 $\mu\text{m}$
D90	17.60 $\mu\text{m}$



**Side Effect**

**# Side Effect : particle aggregation, rough feeling**

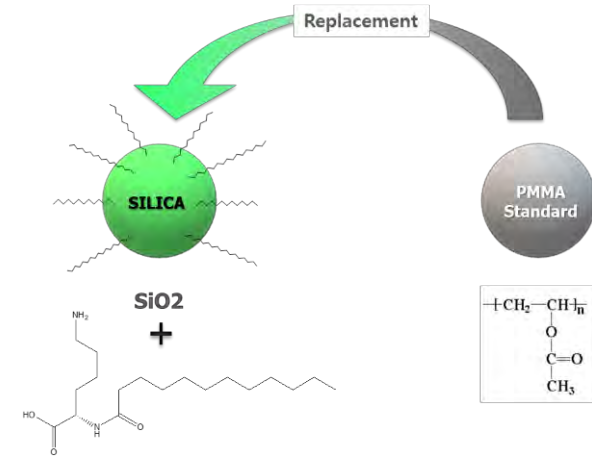




# SPHESTA MD7 AM

# SPEC of SPHESTA MD7 AM

	SPHESTA MD7 AM	PMMA Standard
Type	Spherical powder	Spherical powder
INCI	Silica & Lauroyl Lysin	Poly methyl methacrylate
CAS. NO	7631-86-9 & 52315-75-0	9011-14-7
Particle Size	5.0 ~ 9.0 um	5.0 ~ 10.0um
Oil Absorption	80 ~ 120	50 ~ 90
Hydrophobicity [LXTM-007]	2.5 Min	3.0 Min



01

## Sensory

Most similar to Plastic Powder

02

## Natural source

Coating agent : Lauroyl Lysin

03

## Selective Sebum Control

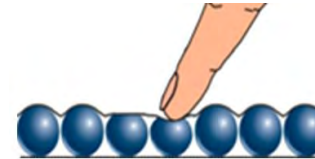
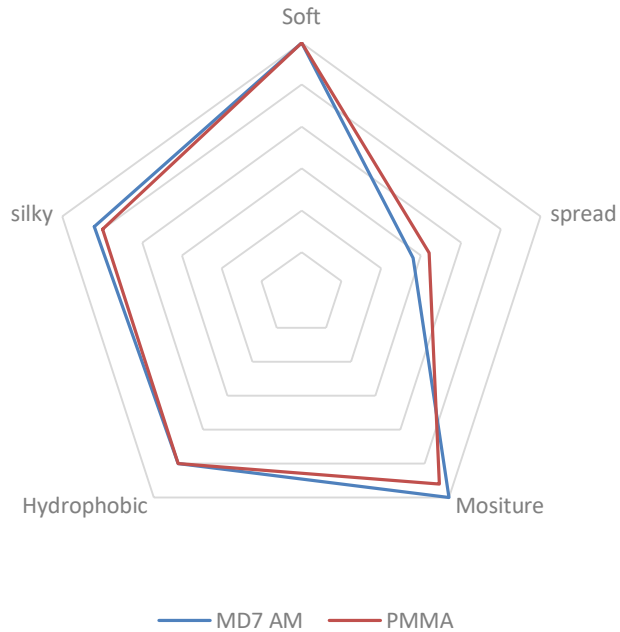
Fast Absorption

01

## Sensory

Most similar to Plastic Powder

Blind Test 20 person  
( 2021 Jan )



MD7 AM

Standard  
PMMA

# Selective Sebum Control TEST



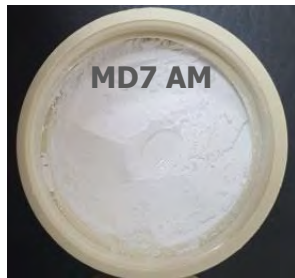
## Loose Powder Formulation - HTU0122LP-FA02

Phase	Trade Name	INCI	MD7 AM	MD7	Competitor silica
A	SPHESTA MD7 AM	Silica & Lauroyl Lysin	65.5		
	SPHESTA MD7	Silica		65.5	
	Competitor Silica	Silica			65.5
	ELASTHA SP 101	Vinyl Dimethicone/methicone Silsesquioxane Crosspolymer	1	1	1
	LX Glight 1000	Boron Nitride & Triethoxycaprylsilane	2.0	2.0	2.0
	LX PMSQ P50	Polymethylsilsesquioxane	10.0	10.0	10.0
	LX PMMA PR7	Polymethylmethacrylate	15.0	15.0	15.0
B	Dimethicone 100cs	Dimethicone	1.0	1.0	1.0
	DC 556	Phenyl Trimethicone	5.0	5.0	5.0
	GMCY	Glyceryl Caprylate	0.3	0.3	0.3
	Phenoxy Ethanol	Phenoxy Ethanol	0.2	0.2	0.2
			0.007	0.007	0.007
			100.0	100.0	100.0

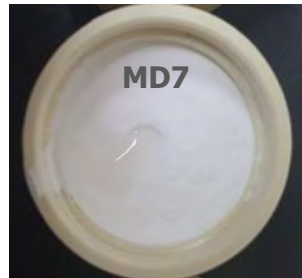
## Standard Operating Procedures

1. Weigh A and Mix it
2. Weigh B and Mix it
3. Input B into A  
→ Mixer 3,000rpm ; 15Sec, 3times
4. Filter by 100 Mesh

### Add Liquid Paraffin & Check after 5min



**Fast** absorption



Normal absorption



Normal absorption

**SPHESTA ECO 3, ECO 7**  
**& PMMA Standard**

**SPHESTA ECO 10**  
**& POROUS PMMA**

# SPEC of SPHESTA ECO7, ECO3



	SPHESTA ECO 3	SPHESTA ECO 7	PMMA Standard	SPHESTA ECO H10	PMMA Porous type
Type	Spherical powder	Spherical powder	Spherical powder	Spherical powder	Spherical powder
INCI	Silica & Lauryl Alcohol & Cetyl Alcohol	Silica & Lauryl Alcohol & Cetyl Alcohol	Poly methyl methacrylate	Silica & Lauryl Alcohol & Cetyl Alcohol	Poly methyl methacrylate
CAS. NO	7631-86-9 & 112-53-8 & 36653-82-4	7631-86-9 & 112-53-8 & 36653-82-4	9011-14-7	7631-86-9 & 112-53-8 & 36653-82-4	9011-14-7
Particle Size	1.5 ~ 4.5 um	5.0 ~ 10.0 um	5.0 ~ 10.0um	10.0 ~ 15.0 um	5.0 ~ 10.0um
Oil Absorption	50 ~ 90	50 ~ 90	50 ~ 90	170 ~ 210	170 ~ 210
Hydrophobicity [LXTM-007]	3.5 Min	3.5 Min	3.0	3.5 Min	4.0 Min

Similar SPEC

Similar SPEC

**01 Replacement of Plastic beads**  
Poly Methyl Methacrylate standard beads grade replacement

**02 Natural source**  
Coating agent : Lauryl Alcohol and Cetyl Alcohol

**03 Selective sebum control**  
Excellent / Fast Absorption / High Oil Absorption

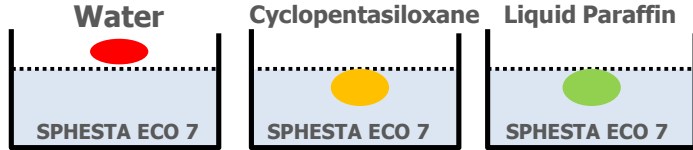
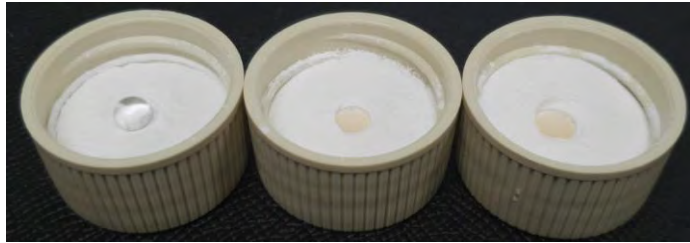


# Selective Sebum Control Test

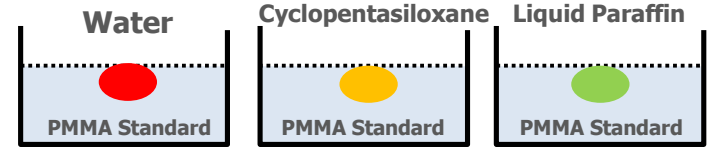
# ★ Selective sebum control



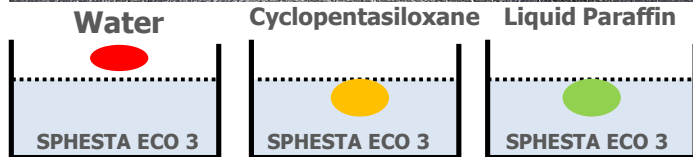
## ★ SPHESTA ECO 3 ( Natural ) After input 3min



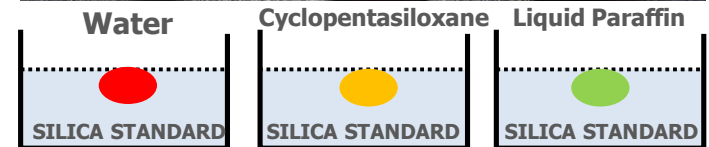
## PMMA Standard After input 3min



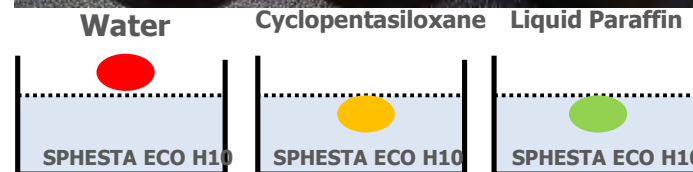
## ★ SPHESTA ECO 7 ( Natural ) After input 3min



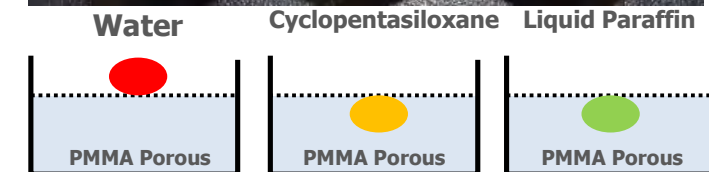
## SILICA Standard After input 3min



## ★ SPHESTA ECO H10 After input 3min



## ★ PMMA Porous type After input 3min



# Formulation\_Powder Pact



PHASE	Ingredient	INCI	%
A	LX TALC 46R ASM	Talc, Triethoxycaprylylsilane	TO100
	SPHESTA ECO 7	Silica, Lauryl Alcohol, Cetyl Alcohol	20.00
	ELASTA SP101	VINYL DIMETHICONE/METHICONE SILSESQUIOXANE CROSSPOLYMER	2.00
B	LX BIANCO 200	Titanium Dioxide, Triethoxycaprylylsilane	10.00
	LX IOY ASM		
	LX IOR ASM	Iron Oxide, Triethoxycaprylylsilane	p.s
	LX IOB ASM		
D	Preservative DM 100	Phenoxy ethanol, Ethylhexylglycerin Dimethicone	p.s 3.00

## Key Ingredients

**LX TALC 46R ASM**  
**SPHESTA ECO 7**  
**ELASTA SP101**

**LX BIANCO 200**  
**LX IOY ASM**  
**LX IOR ASM**  
**LX IOB ASM**

PHASE	Ingredient	INCI	%
A	LX TALC 46R ASM	Talc, Triethoxycaprylylsilane	TO100
	LX PMMA PR7	Poly methyl methacrylate	20.00
	ELASTA SP101	VINYL DIMETHICONE/METHICONE SILSESQUIOXANE CROSSPOLYMER	2.00
B	LX BIANCO 200	Titanium Dioxide, Triethoxycaprylylsilane	10.00
	LX IOY ASM		
	LX IOR ASM	Iron Oxide, Triethoxycaprylylsilane	p.s
	LX IOB ASM		
D	Preservative DM 100	Phenoxy ethanol, Ethylhexylglycerin Dimethicone	p.s 3.00

## Key Ingredients

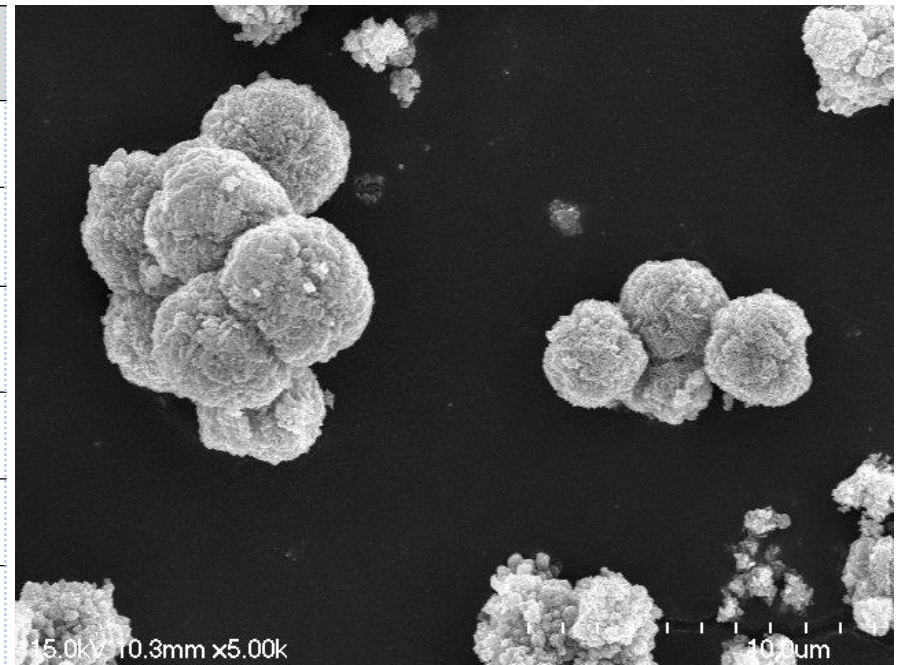
**LX TALC 46R ASM**  
**LX PMMA PR7**  
**ELASTA SP101**

**LX BIANCO 200**  
**LX IOY ASM**  
**LX IOR ASM**  
**LX IOB ASM**



# Zinc Oxide SS-2000

	SS-2000
Type	Spherical Powder
INCI	Zinc Oxide & Triethoxycarylylsilane
CAS. NO	1314-13-2 & 2943-75-1
Particle Size	1.0 ~ 5.0 um
Oil Absorption	40 ~ 80
Hydrophobicity [LXTM-007]	3.5 Min



01

## Replacement of Plastic beads

Spherical Zinc Oxide Powder

02

## Excellent Sensory

Sensory of SS-2000 better than Zinc Oxide standard grade

03

## Selective sebum control

Fast Absorption

# Selective Sebum Control Test

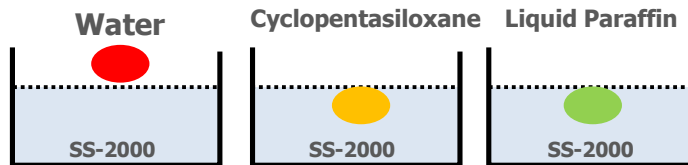
★ Selective sebum control



★ SS-2000



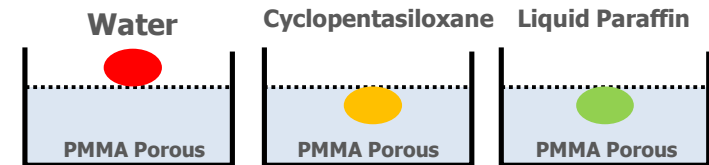
After input 5sec



PMMA Porous type



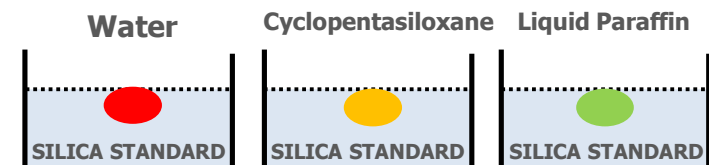
After input 3min



SILICA Standard ( Non coating )



After input 3min



# EMBO SILICA

## EMBO SILICA ( INCI : SILICA & PMSQ )

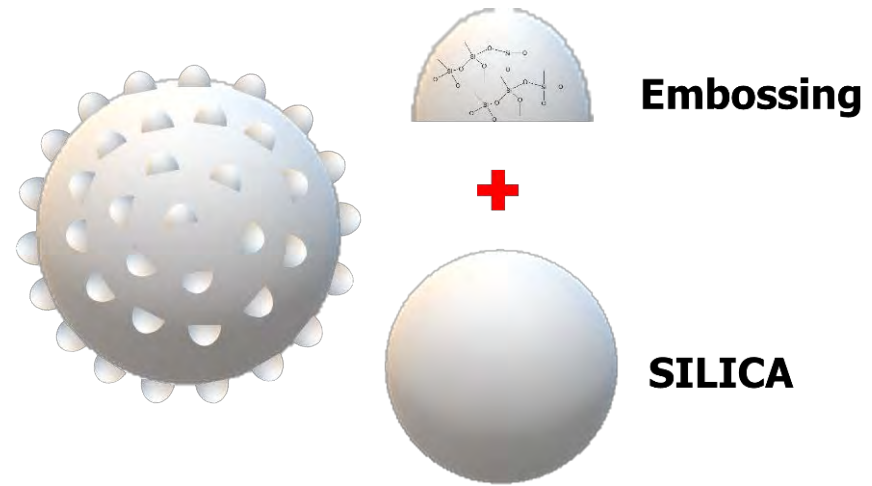
### How can silica be soft ?

Usual silica is not soft because it is not elastic.  
Our silica was coated with embossing on the silica surface.

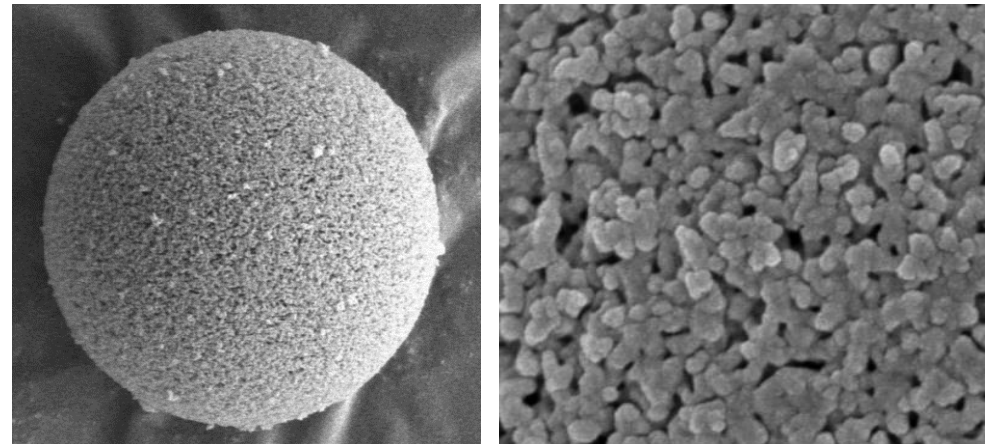
Because embossing gives softness,  
our silica has a soft feel.

Because it contains a **soft feeling**, the feeling of moisture is higher than that of standard silica.

Although this raw material is silica, it has a texture similar to that of Poly Methylmethacrylate.

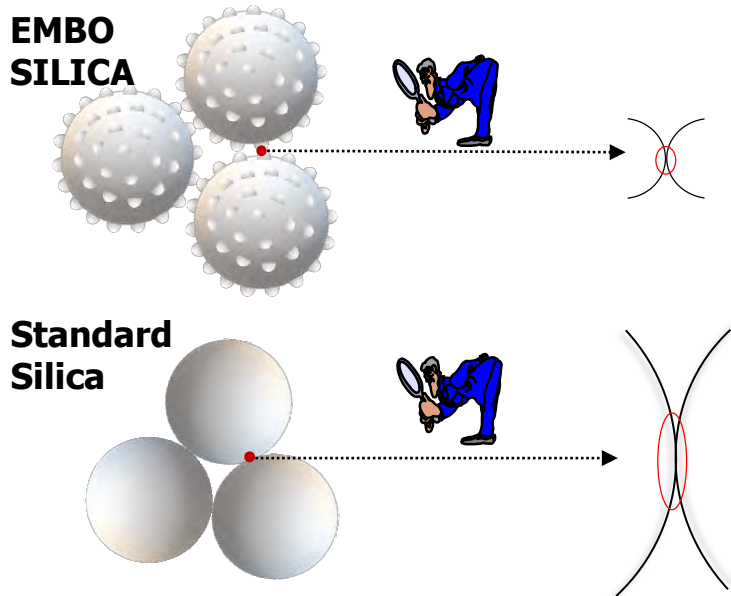


Product Name	INCI	Particle Size(μm)	OA
<b>EMBO SILICA</b>	Silica & PMSQ	5 ~ 11	60 ~ 140

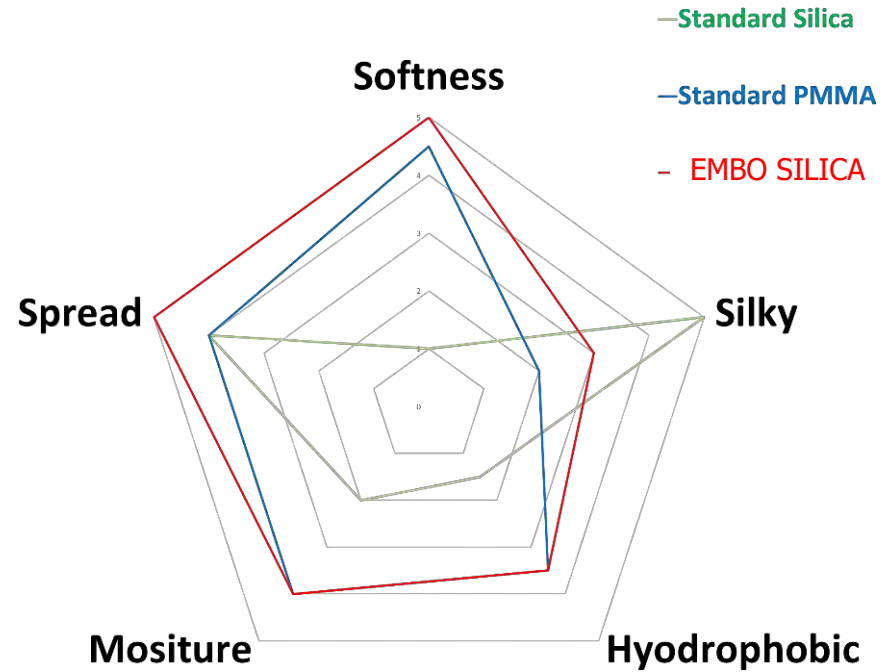




Unlike general spherical powders, the contact area between particles is very small, so the spread-ability is the best.



## SENSORY TEST



## LOOSE POWDER

PHASE	Ingredient	INCI	%
A	EMBO SILICA	Silica, PMSQ	TO100
	ELASTA SP 101	VINYL DIMETHICONE/METHICONE SILSESQUIOXANE CROSSPOLYMER	2.00
B	Preservative	Phenoxy ethanol, Ethylhexylglycerin	p.s

# Water Powder LX7

## Composition Information

Ingredient	Contents (%)	CAS No.
SILICA	75 ~ 85 %	7631-86-9
Poly methylsilsequioxane	15 ~ 25 %	68554-70-1

## Specification

Items	Specification	Method
Appearance	White Powder	Visual
Odor	Characteristic Odor	Sensory
Particle Diameter( $\mu\text{m}$ ) D50	7.0 ~ 11.0	Particle size analyser
pH	5.0 ~ 9.0	10% in distilled water & ethanol 9:1
Oil Absorption(ml/100g)	60 ~ 140	Liquid Paraffin
Loss on Drying (%)	6.0 Max	2g, 130°C, 30 min.
Lead(pb)	10 ppm max	ICP-Mass
Arsenic(As)	5 ppm max	



# Water Powder LX7

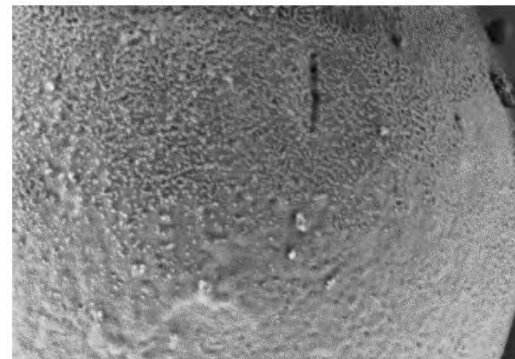
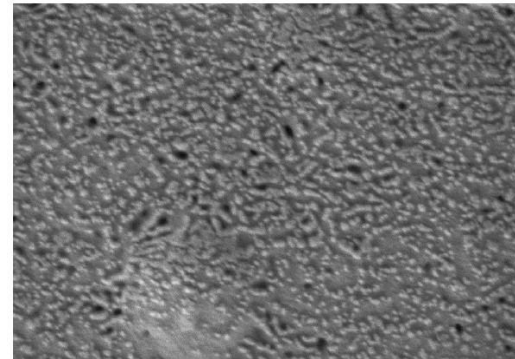


INCI Name	Product Name	CAS.NO	Particle Size(μm)	Oil Absorption (ml/100g)
Silica & PMSQ	Water Powder LX7	7631-86-9 68554-70-1	7 ~ 11	100 ~ 180

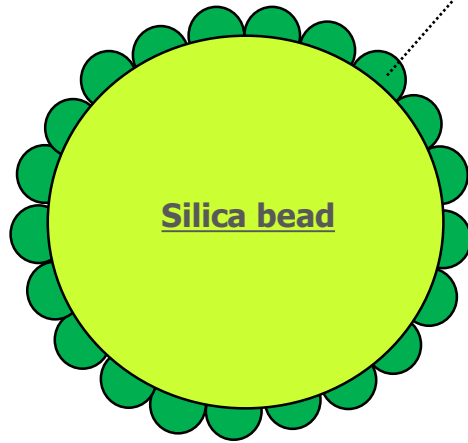
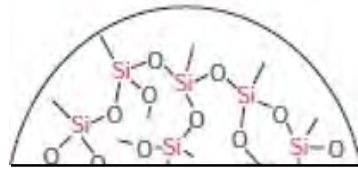


## Characteristic

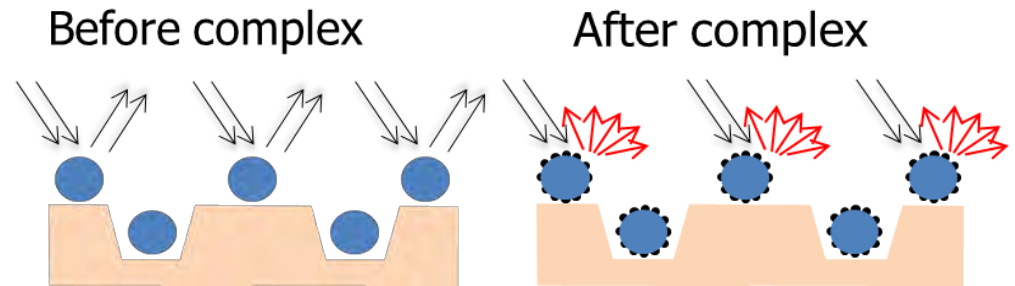
- Improving the unique feel of silica
- Touch modifying agent
- Soft feel effect
- Gloss control ( silica )
- Flow ability Excellent





Flow ability Excellent



Soft Focus Effect  
Soft Feeling



 A hybrid micro sphere of silica and silicone resin  
Improving the unique feel of silica

 A hybrid micro sphere of silica and silicone resin  
Improving the unique feel of silica

# Our Proposal of Glossy Essense (O/W)



Feature **Moist Feeling, Velvety Skin**

Lab No.: HTV01219ES-GL(A03)

PHASE	INGREDIENTS	INCI	%
A	D.I.WATER	Water	TO100
	Glycerin	Glycerin	6.00
	Hyalgan LL	Hyaluronic acid	0.01
	MOILUB 1000	Biosaccharide Gum-1	5.00
	MOILUB 701A	PEG/PPG-17/6 Copolymer	5.00
	TWEEN 60	Polysorbate 60	1.50
A-1	Water	Water	10.00
	Keltrol F	Xanthan gum	0.10
B	Water Powder LX7	Silica ,Polymethylsilsequioxane	4.00
	LX MICA (S) ASM	Mica, Triethoxycaprylylsilane	0.50
	DC245	Cyclopentasiloxane	3.50
	Moicos N115	Methyl hydrogenated rosinatate	3.50
	CRODAMOL™ GTCC	Caprylic/Capric Triglyceride	1.00
C	SIMULGEL™ EG	Sodium Acrylate / Sodium Acryloyldimethyl Taurate Copolymer / Isohexadecane / Polysorbate 80	1.50
D	Natureclean RP9	Raspberry Ketone/Propanediol	2.50



## Standard Operating Procedures

1. Heat phase A to 80°C
2. After stirring A-1, put into A phase
3. After stirring phase B, put into phase A  
Homo mix at 3000RPM for 10 min
4. After input of C phase, homo mix at 3000RPM for 5 min
5. Put D-phase at 45°C
- 6 Finish after 35 °C cooling



## Key Ingredients our products

Water Powder LX7

Commend

MOILUB 1000

MOILUB 701A

MOICOS N115

Reference : None

**PMMA**

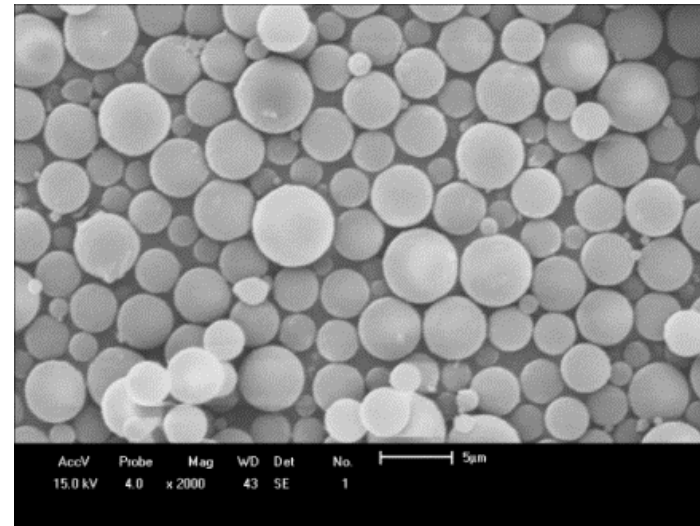
## LX PMMA PR7

INCI Name	Product Name	CAS.NO	Particle Size( $\mu\text{m}$ )	Oil Absorption (ml/100g)
<b>PMMA</b>				
Poly methyl-metacrylate	LX PMMA PR7	9011-14-7	7	50 ~ 80



### Is a cross linked PMMA Powder

- Touch modifying agent
- Soft feel effect
- Gloss control
- Concealing effect to hide defects



# Poly Methylmethacrylate Powder

**LX PMMA PR7** is an organic crosslinked microsphere, which developed by Luxon's original suspension polymerization. When it was used to cosmetic, it provides a **rolling effect**, the prevention of aggregation, an elegant silky texture, oil absorption etc.



• LCD panel filler



• Ink, Paint



• Cosmetic

LX PMMA PR7 Application field

Spread ability test



**LUXON PMMA PR7**

**Competitor PMMA**

# PMSQ Series

# Poly Methylsilsequioxane Powder



## LX PMSQ Series

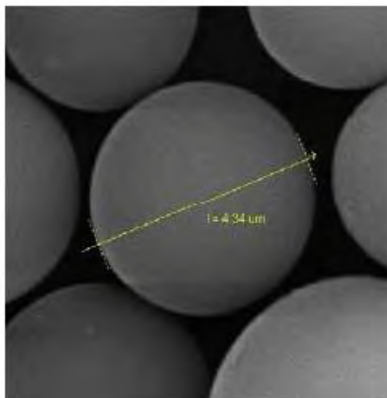
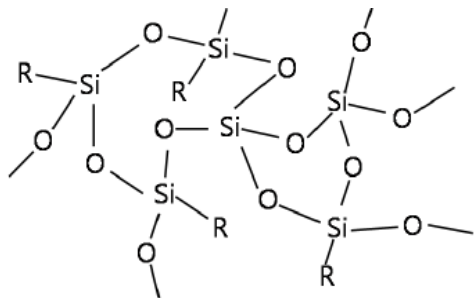
INCI Name	Product Name	CAS.NO	Particle Size(μm)	Oil Absorption (ml/100g)
<b>PMSQ</b>				
Poly methylsilsequioxane	<b>NEW</b> LX PMSQ P50	68554-70-1	3.5 ~ 6.5	30 ~ 70
	<b>NEW</b> LX PMSQ P100		8.0 ~ 13.0	30 ~ 70

### Spherical PMSQ is widely used in

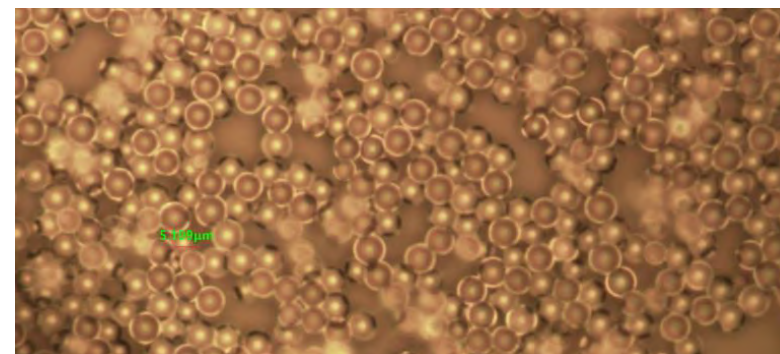
Color cosmetics

Daily skin care Products

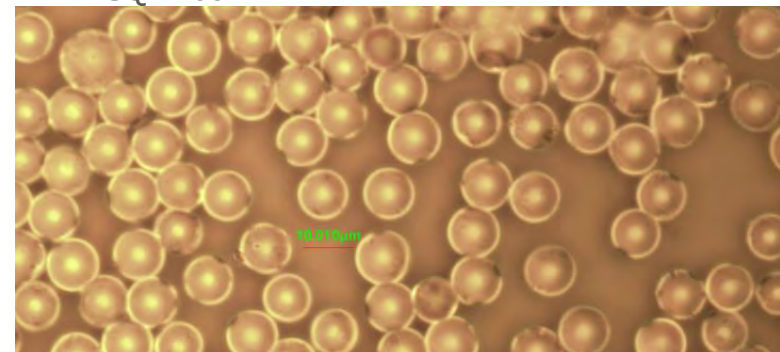
Recreational sunscreen Products



LX PMSQ P50



LX PMSQ P100





## Soft Focus effect of LX PMSQ Series

- PMSQ scatters light from as many angles as the **soft focus effect** of the lens.
- PMSQ series naturally expresses skin shades

**SOFT FOCUS EFFECT**



## LX PMSQ Series

LOW REFLECTIVE INDEX 1.43

Does not dissolve or swell in all sorts of solvent

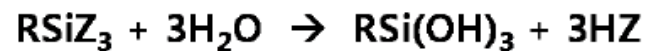
Excellent water repellency

More slip and lubricity

Better skin feel

Excellent elasticity

LX PMSQ is a silicone resin sphere with 3-dimensional network structure.



**Hydrolysis**

**Condensation**

**Condensation**

**Vinyl Dimethicone/Methicone Silsesquioxane  
Crosspolymer Powder**

# Vinyl Dimethicone/Methicone Silsesquioxane Crosspolymer Powder



## ELASTA SP 101

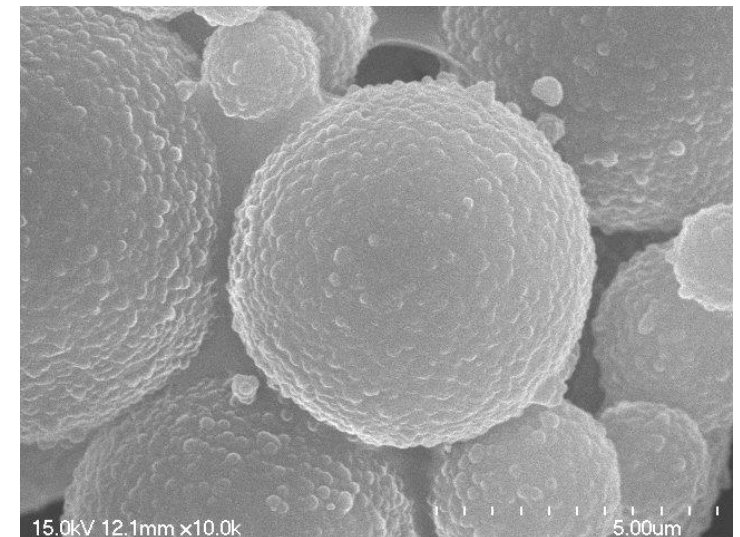
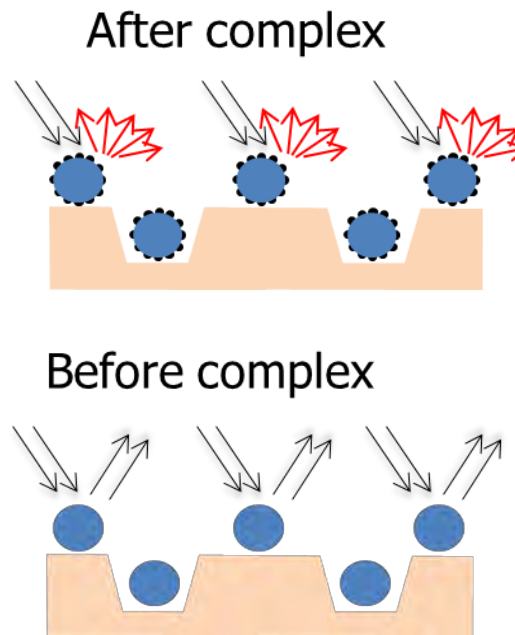
INCI Name	Product Name	CAS.NO	Particle Size(μm)	Oil Absorption (ml/100g)
Vinyl Dimethicone/Methicone Silsesquioxane Crosspolymer	ELASTA SP101	243137-53-3	8.0 ~ 13.0	40 ~ 60

## Spherical Vinyl Dimethicone/Methicone Silsesquioxane Crosspolymer

**is widely used in**

- Color cosmetics
- Daily skin care Products
- Recreational sunscreen Products

**Soft Focus Effect**  
**Soft Feeling**

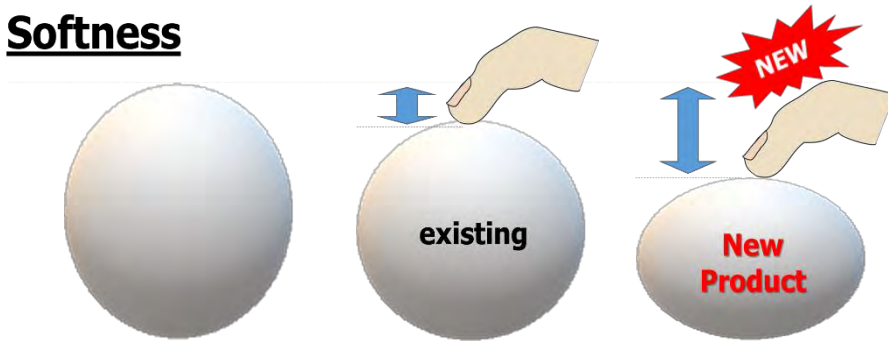


# ELASTA HSP101

## ELASTA HSP101

( INCI : Vinyl Dimethicone /  
Methicone Silsesquioxane Crosspolymer )

### Softness



### How did you develop softer than existing products?

By strengthening the method of the coating, the softness was increased compared to the existing product.

Also, **ELASTA HSP 101** is coated with shell, which Scatters light at many different angles. A lot of scattering of light gives a soft focus effect.

## LX ELASTA HSP 101

Embossing is more densely coated



## LX ELASTA SP101

As a general grade, Embossing is well coated.



# ELASTA HSP101

## ELASTA Series

Product Name	CAS.NO	Particle Size( $\mu\text{m}$ )
LX ELASTA SP101	243137-53-3	8.0 ~ 15.0
<b>LX ELASTA HSP 101</b>		

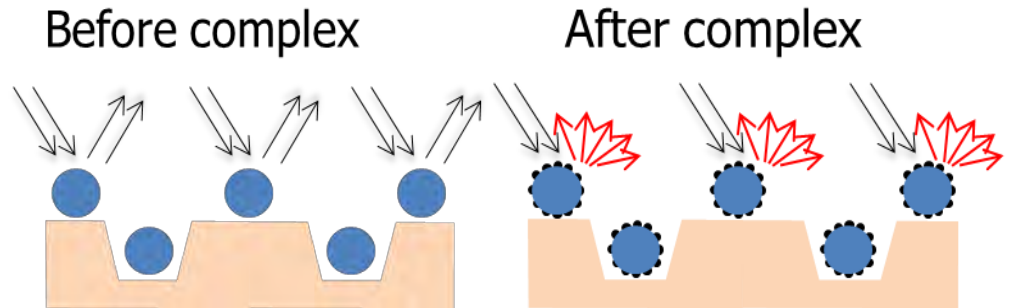
## Features

- Offer Elastic Texture
- Soft Focus and blurring effect due to lower refractive index
- Excellent silky and smooth texture
- Hydrophobic surface
- Thickening effect

## Applications

- MAKE-UP Formulations
- Skin-Care Formulations
- Other Potential Formulations.

## Soft Focus Effect



ELASTA HSP101 is a hybrid micro sphere of silicone elastic polymer and silicone resin.

It offers elastic texture with the increased brightness, when being applied to skin.

It makes wrinkles invisible by filling in the lines of wrinkles.

Refractive index of ELASTA HSP101 is lower than ordinary inorganic powders, **leading to soft focus and blurring effect on skin.**

In addition, ELASTA HSP101 has a higher oil adsorption than other silicone powders or PMSQ powders, which can induce **thickening effect.**

# Formulation\_Sun Stick



PHASE	Ingredient	INCI	%
A	MIPEARL BGC	Butylene glycol dicaprylate/dicaprate	TO100
	Polyethylene	Polyethylene	15.00
	DM 100	Dimethicone	12.00
	CEH	<b>Ethylhexyl Methoxycinnamate</b>	4.00
	CERESIN	CERESIN	2.00
	Paracera N 88	Synthetic Wax	0.50
	PARSOL 340	OCTOCRYLENE	10.00
	PARSOL MCX	<b>Ethylhexyl Methoxycinnamate</b>	7.50
	<b>LX DTN 60AB</b>	<b>Please refer to LUXON MSDS</b>	<b>4.00</b>
	Uvinul® A Plus	Diethylamino Hydroxybenzoyl Hexyl Benzoate	3.00
	Tinosorb® S	Bis-Ethylhexyloxyphenol Methoxyphenyl Triazine	2.00
	<b>SPHESTA MD 7</b>	<b>Silica</b>	<b>2.00</b>
B	<b>SP101</b>	<b>Vinyl Dimethicone/Methicone Silsesquioxane Crosspolymer</b>	<b>7.50</b>
	<b>LX PMMA PR7</b>	<b>Polymethyl Methacrylate</b>	<b>7.50</b>
	Viet A	Retinyl Palmitate	p.S
C	<b>Alpha-Melight (ECO) KFDA Grade</b>	Bisabolol	p.s
	Preservative	Phenoxy ethanol, Ethylhexylglycerin	p.s

## Key Ingredients

**LX DTN 60AB**  
**ELASTA SP101**  
**SPHESTA MD7**  
**LX PMMA PR7**

## Ingredient

Polyethylene, Diemthicone, Octocrylene, **Vinyl Dimethicone/Methicone Silsesquioxane Crosspolymer**, Polymethyl Methacrylate, Ethylhexyl Methoxycinnamate, Ethylhexyl Methoxycinnamate, Diethylamino Hydroxybenzoyl Hexyl Benzoate, Ceresin, Bis-Ethylhexyloxyphenol Methoxyphenyl Triazine, Silica, Retinyl Palmitate, Bisabolol, Phenoxy ethanol, Ethylhexylglycerin

Reference : AHC Natural Perfection Double Shield Sun Stick



# Formulation\_Invisible Setting Powder



PHASE	Ingredient	INCI	%
A	LX TALC 46R ASM	Talc, Triethoxycaprylylsilane	TO100
	LX SERICITE DSM	Sericite, Dimethicone	20.00
	SILIA LX10	Silica	15.00
	ELASTA SP101	VINYL DIMETHICONE/METHICONE SILSESQUIOXANE CROSSPOLYMER	10.0
	LX IOY ASM		
B	LX IOR ASM	Iron Oxide, Triethoxycaprylylsilane	p.s
	LX IOB ASM		
D	Preservative	Phenoxy ethanol, Ethylhexylglycerin	p.S

## Ingredient

Talc, Sericite, Silica,  
**Vinyl Dimethicone/Methicone silsesquioxane crosspolymer**,  
 Dimethicone, Triethoxycaprylylsilane,  
 Yellow Iron oxide, Red Iron oxide, Black Iron Oxide  
 Phenoxy ethanol, Ethylhexylglycerin

Reference : MAKE UP FOR EVER/ UHD SETTING POWDER



## Key Ingredients

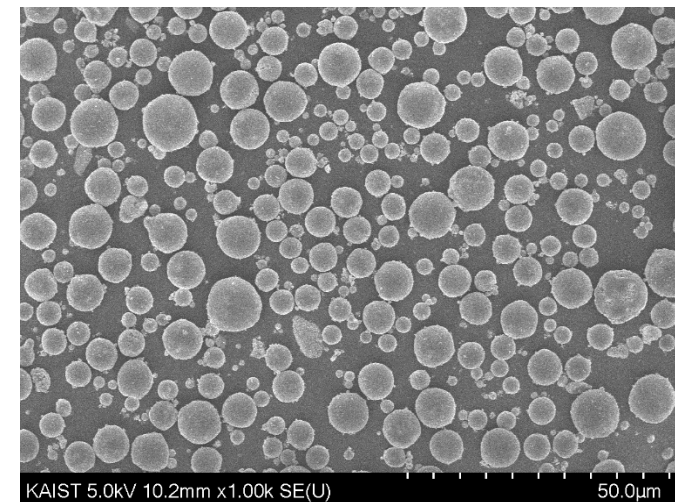
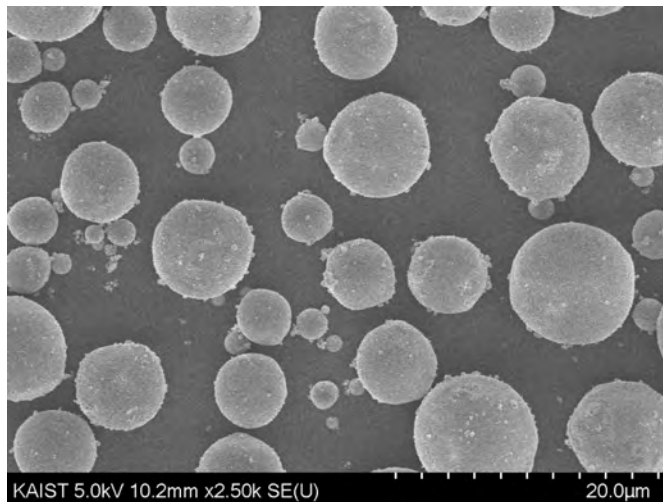
**LX TALC 46R ASM**  
**LX Sericite DSM**  
**SILIA LX10**  
**ELASTA SP101**

**LX IOY ASM**  
**LX IOR ASM**  
**LX IOB ASM**



**TIS-35, TIS-35 AS**  
**( TIS : Titanium dioxide In Silica )**

Grade	Descriptions	Our proposal	Avg. Particle size(um)	Oil Absorption (ml/100g)
LX TIS-35	Titanium Dioxide 35%(250nm) in Silica	Natural Tone-Up Cream, SUN Cream,	5~10um	90~130
LX TIS-35AS	Titanium Dioxide 35%(250nm) in Silica & Triethoxycaprylylsilane	Whitening Agent, Etc.,	5~10um	80~120



## **LX TIS 35, 35AS**

Natural coverage

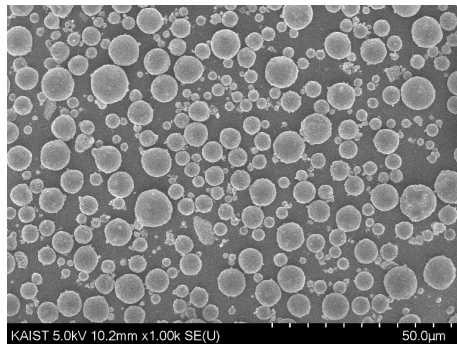
Luxurious feel

Soft feeling

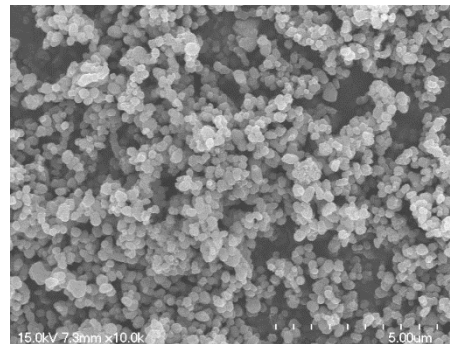
Particle Size: 7um

( TiO<sub>2</sub> 35% + Silica 65% )

( TiO<sub>2</sub> 35% + Silica 65% ) + AS 3%



TIS-35 : **Soft** Sensory



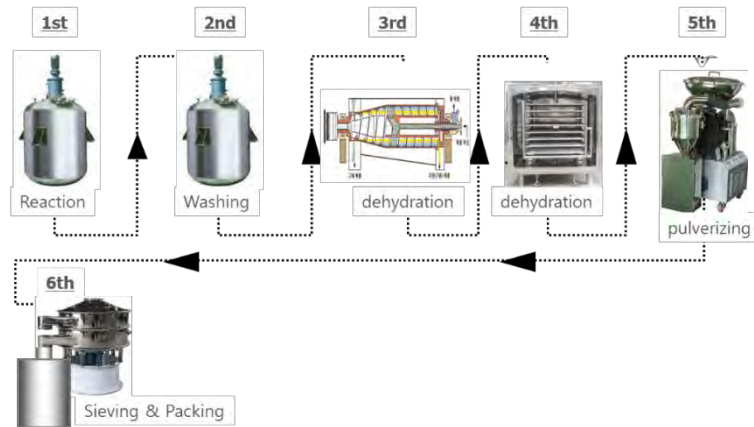
TiO<sub>2</sub> : **Rough** Sensory

**It's different**

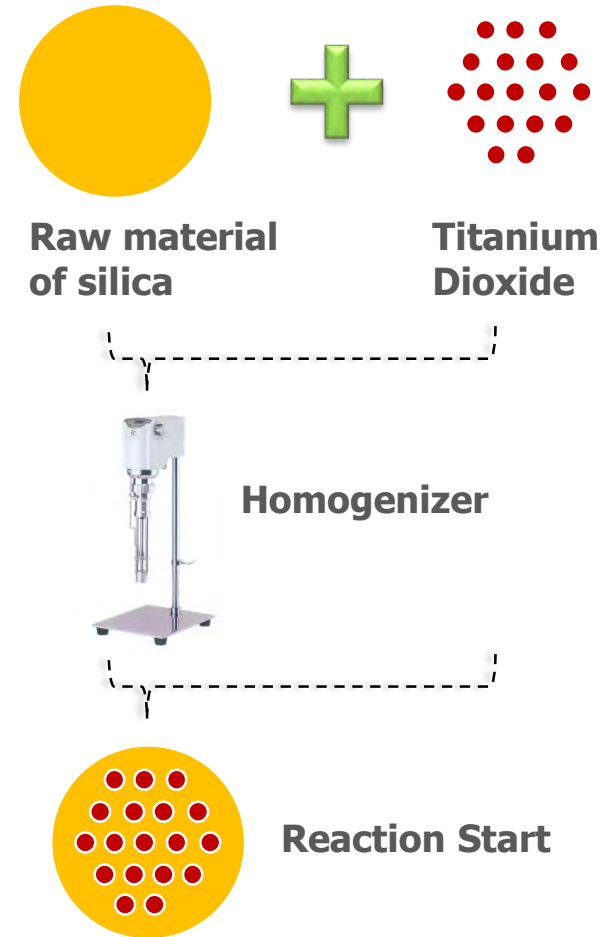
Using the TIS-35 developed by our company instead of TiO<sub>2</sub>

Soft sensory, adhesion, and increased coverage.

## Silica Flow chart



## Before 1step

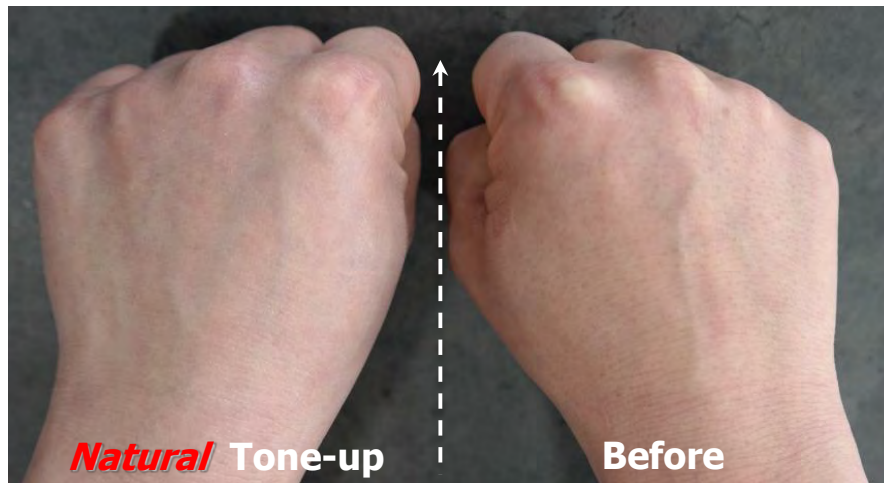


# Formulation Tone Up Cream



## O/W Formulation\_1901\_TONE UP Cream\_TC-TWSP6-104-PEH

Phase	Trade Name	INCI	%
A	RHERODOL TW S 120V (TWEEN 60)	Polyoxyethylene (20) Sorbitan Monostearate	0.5
	Hicos GTC	GTCC	2.0
	Dimethicone	Dimethicone	2.0
	<b>LX TIS-35, 35AS</b>	Silica & Titanium Dioxide	3.0
	Serasence SF CM 56	Cyclopentasiloxane, Cyclohexasiloxane	3.0
B	D.I-WATER	D.I-WATER	53.48
	EDTA-2NA	EDTA-2NA	0.02
	<b>NIACINAMIDE</b>	<b>NIACINAMIDE</b>	2.0
	Propylene glycol	Propylene glycol	15.0
	BH-8000	1.2 Hexanediol	2.0
	GLYCERIN	GLYCERIN	15.0
C	RHEOSOL AVH	Sodium Polyacrylate (and) Ethylhexyl Stearate (and) Trideceth-6	2.0
			100.0



# Surface Treatments Technology

*Version 3.2*



For more information

Website : [www.luxonkorea.co.kr](http://www.luxonkorea.co.kr)

E-Mail : [sales01@luxonkorea.co.kr](mailto:sales01@luxonkorea.co.kr)

Office telephone: +82-31-943-7751

Cellular Phone: +82-10-9869-7751

# Product List



## Color Pigment Series

	Trade Name	INCI NAME	Character
Iron oxide	B-BL ASM	Iron Oxide Black & Triethoxycaprylylsilane	Retention on 200mesh sieve 2.0% MAX
	R-RL ASM	Iron Oxide Red & Triethoxycaprylylsilane	Retention on 200mesh sieve 2.0% MAX
	Y-LL ASM	Iron Oxide Yellow & Triethoxycaprylylsilane	Retention on 200mesh sieve 2.0% MAX
	PHILICSTA BLACK	Iron Oxide Black & Phytic Acid	Retention on 200mesh sieve 2.0% MAX
	PHILICSTA RED	Iron Oxide Red & Phytic Acid	Retention on 200mesh sieve 2.0% MAX
	PHILICSTA YELLOW	Iron Oxide Yellow & Phytic Acid	Retention on 200mesh sieve 2.0% MAX

## TiO2 Series

	Trade Name	INCI NAME	Character
TiO2	LX Bianco 200	Titanium Dioxide & Triethoxycaprylylsilane	D50 : 200nm ~ 300nm
	LX Bianco 200N	Titanium Dioxide & Stearic Acid	D50 : 200nm ~ 300nm
	LX Bianco 200HD	Titanium Dioxide & Hydrogen Dimethicone	D50 : 200nm ~ 300nm
	LX Bianco 200MSM	Titanium Dioxide & Methicone	D50 : 200nm ~ 300nm
	PHILICSTA WHITE	Titanium Dioxide & Phytic Acid	D50 : 200nm ~ 300nm    OA : 20 ~ 50

## ZnO Series

	Trade Name	INCI NAME	Character
ZnO	LX SS-500	Zinc oxide & Silica & Triethoxycaprylylsilane	D50 : 300nm ~ 700nm
	LX SS-500N	Zinc oxide & Silica & Stearic acid (* Lauroyl lysine)	D50 : 300nm ~ 700nm    Natural coating

# Product List



## Talc Series

	Trade Name	INCI NAME	Character
Talc	LX Talc 13R ASM	Talc & Triethoxycaprylylsilane	D50 : 5.0 ~ 10.0 um
	LX Talc 46R ASM	Talc & Triethoxycaprylylsilane	D50 : 10.0 ~ 15.0 um
	LX Talc 46R DSM	Talc & Dimethicone	D50 : 10.0 ~ 15.0 um
	LX Talc AM	Talc & Lauroyl Lysine	D50 : 7.0 ~ 15.0 um
	LX Talc STMC	Talc & Theobroma cacao Seed Butter	D50 : 7.0 ~ 15.0 um
	LX Talc LSA	Talc & Dimethiconol Sterate	D50 : 7.0 ~ 15.0 um

## MICA Series

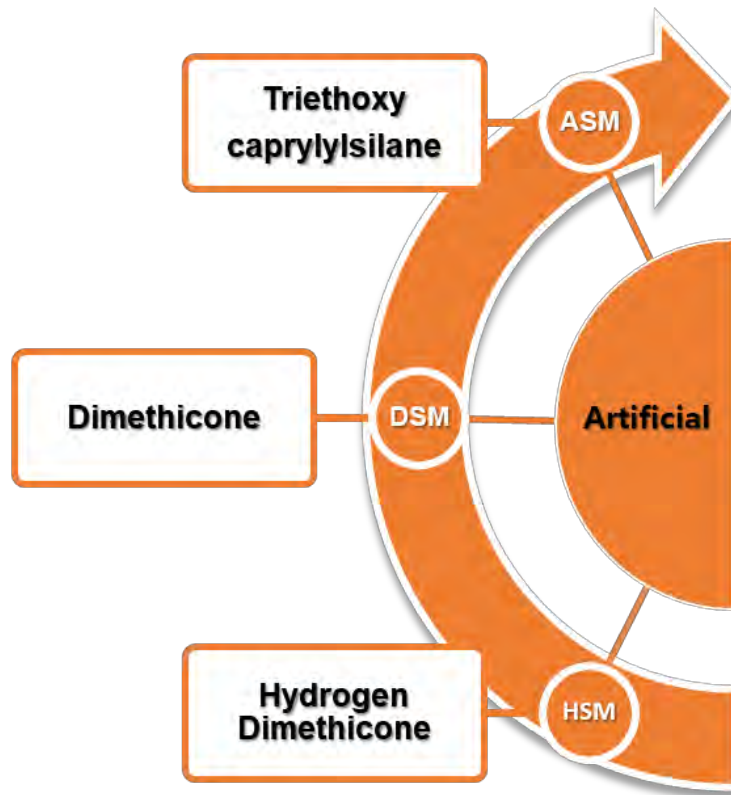
	Trade Name	INCI NAME	Character
MICA	LX MICA ASM	MICA & Triethoxycaprylylsilane	D50 : 12.0um ~ 17.0um
	LX MICA DSM	MICA & Dimethicone	D50 : 12.0um ~ 17.0um
	LX MICA AM	MICA & Lauroly Lysine	D50 : 12.0um ~ 17.0um
	LX MICA LEM	MICA & Hydrogenated Lecithin	D50 : 12.0um ~ 17.0um
	LX MICA STMC	MICA & Theobroma Cacao Seed Butter	D50 : 12.0um ~ 17.0um
	LX MICA LSA	MICA & Dimethiconol Sterate	D50 : 12.0um ~ 17.0um

## Sericite Series

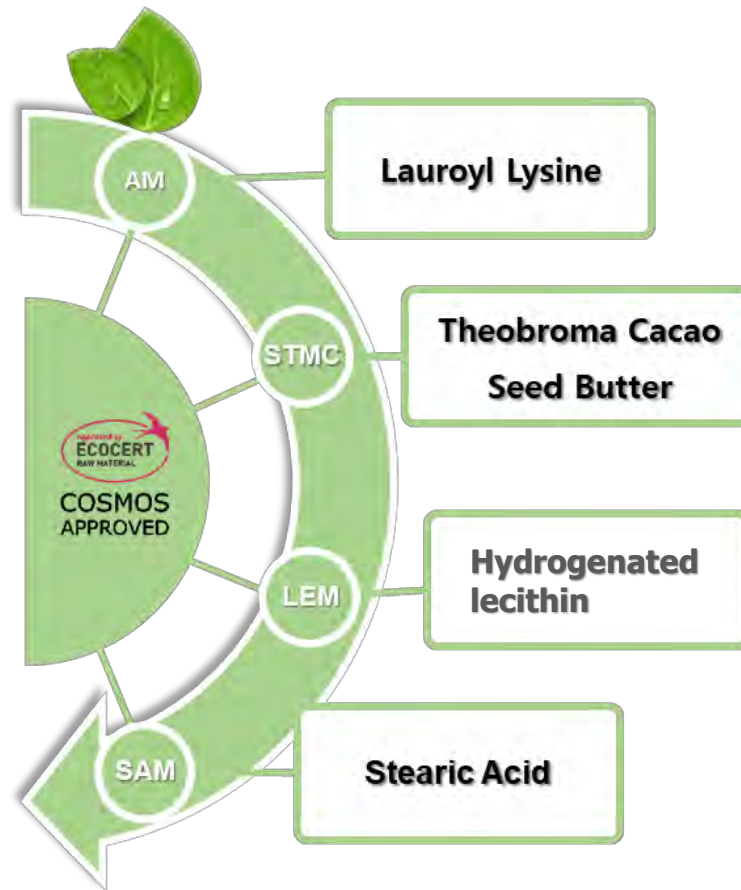
	Trade Name	INCI NAME	Character
Sericite	LX Sericite ASM	Sericite & Triethoxycaprylylsilane	D50 : 12.0um ~ 17.0um
	LX Sericite DSM	Sericite & Dimethicone	D50 : 12.0um ~ 17.0um
	LX Sericite AM	Sericite & Lauroly Lysine	D50 : 12.0um ~ 17.0um
	LX Sericite LEM	Sericite & Hydrogenated lecithin	D50 : 12.0um ~ 17.0um
	LX Sericite STMC	Sericite & Theobroma Cacao & Seed Butter	D50 : 12.0um ~ 17.0um
	LX Sericite LSA	Sericite & Dimethiconol Sterate	D50 : 12.0um ~ 17.0um



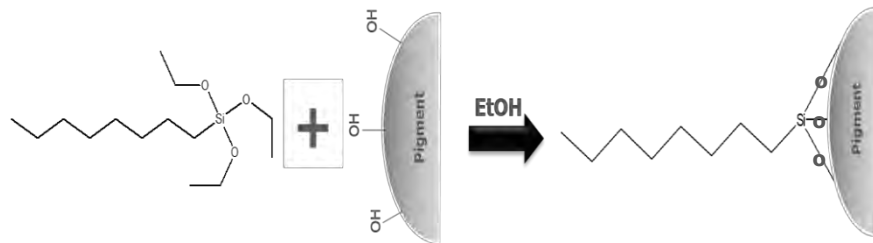
## Artificial Coating Agent



## Natural Coating Agent



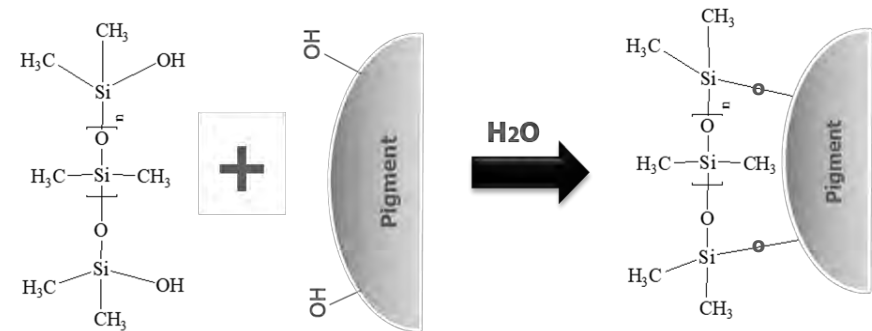
## Triethoxy Caprylsilane



### Characteristic of Agent

- Long-lasting effect
- Improvement dispersibility
- Light feeling
- Improved hydrophobicity

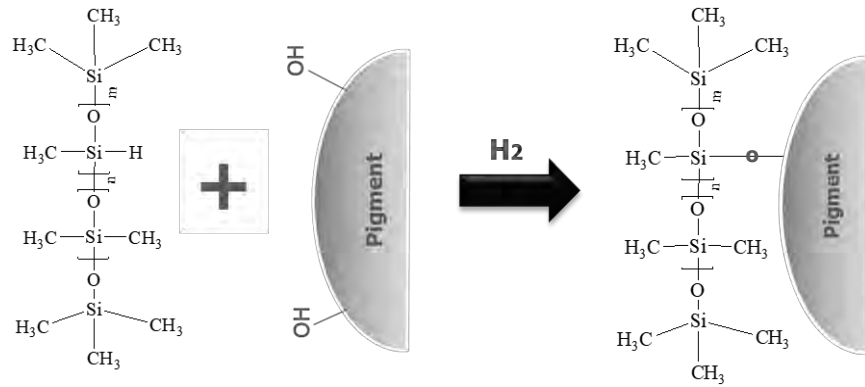
## Dimethicone



### Characteristic of Agent

- Long-lasting effect
- Improvement dispersibility
- Soft feeling
- Slightly wet feeling

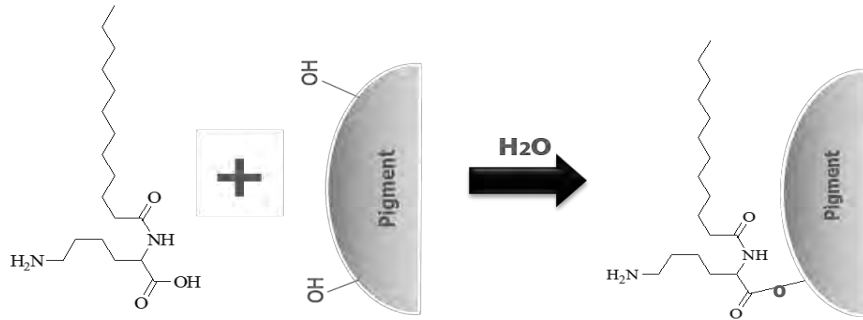
## Hydrogen Dimethicone



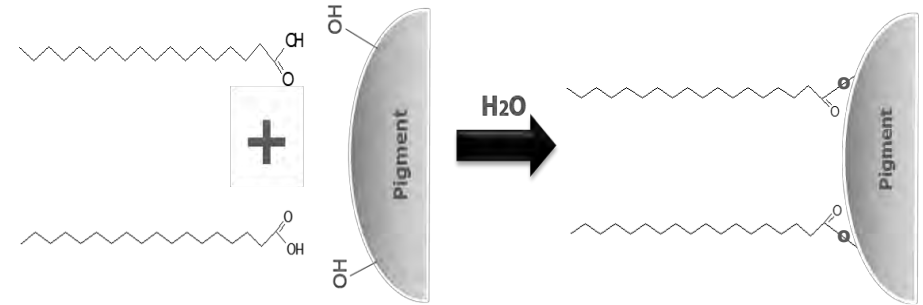
## Characteristic of Agent

- Reduction of H<sub>2</sub> Gas generation
- Advanced methicone
- Soft feeling
- Slightly wet feeling

## Lauroyl Lysine



## Stearic Acid



### Characteristic of Agent

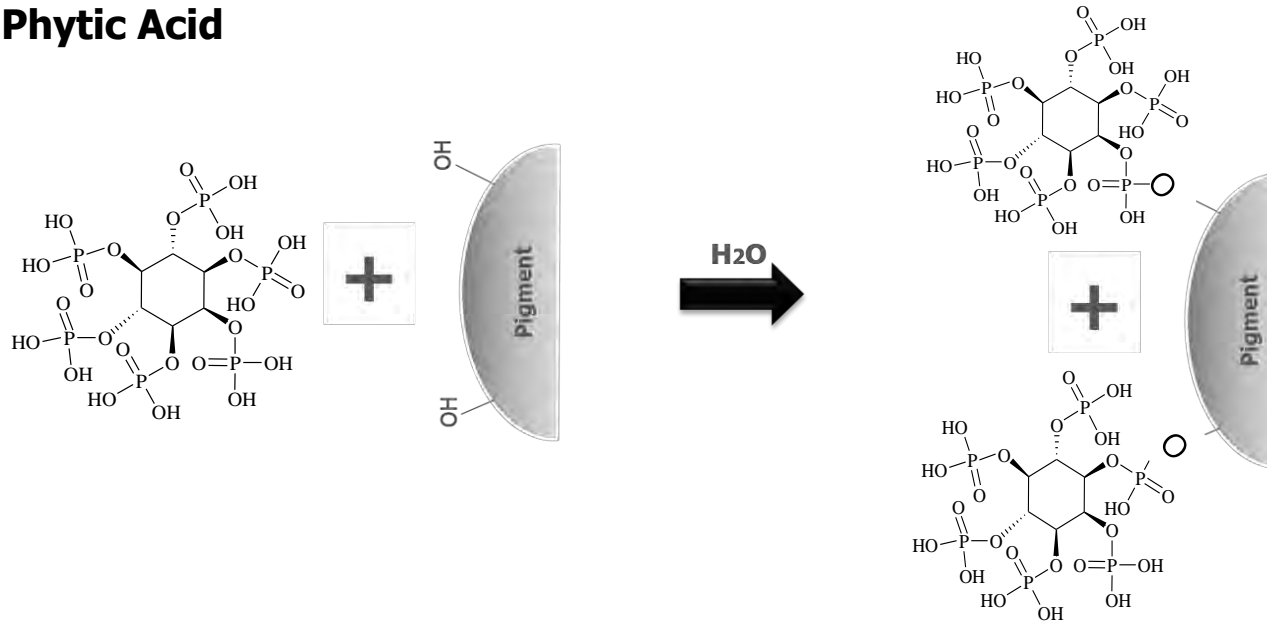
- Natural coating source
- Skin affinity
- Soft feeling
- Moisturizing feeling

### Characteristic of Agent

- Natural coating source
- Skin affinity
- Soft feeling
- Moisturizing feeling

# Hydrophilic Coating Agent

## Phytic Acid



## Characteristic of Agent

Good Re-dispersibility

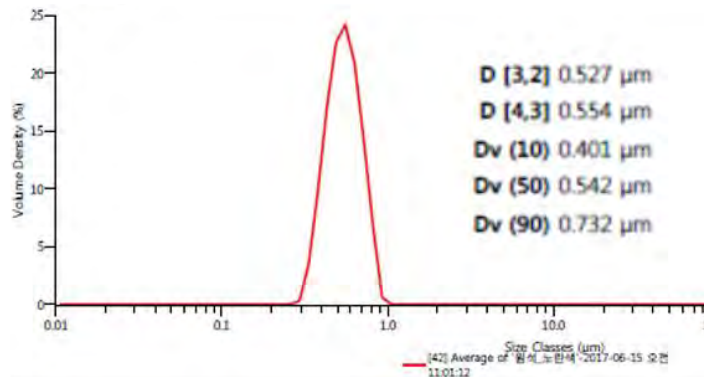
Recommend for skin toner

Color cosmetic / Eyeshadow

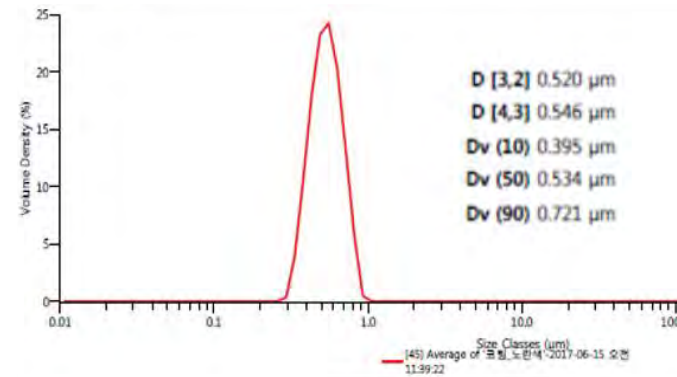
Enhanced stability in O/W

## Substantial surface treatment & grinding technology

**Before** coating (Dv50: **0.542**  $\mu\text{m}$ )



**After** coating (Dv50: **0.534**  $\mu\text{m}$ )



### Coating Method

	Coating Method	Mechanical	Solvent	Chemical repulsion
LUXON	Our Wetting coating	○	○	○
Other companies	Dry coating	○	X	X
	Wetting coating	○	○	X



### Products with technology

Iron Oxide Yellow

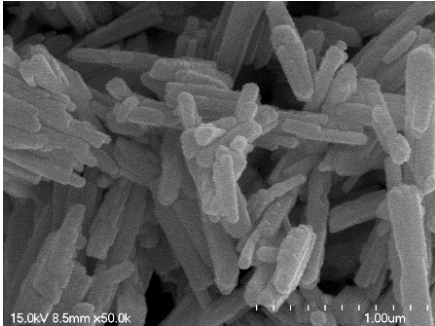
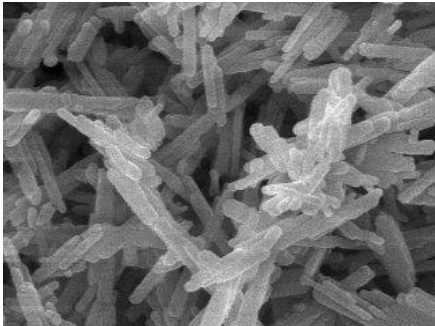

Iron Oxide Red

Iron Oxide Black

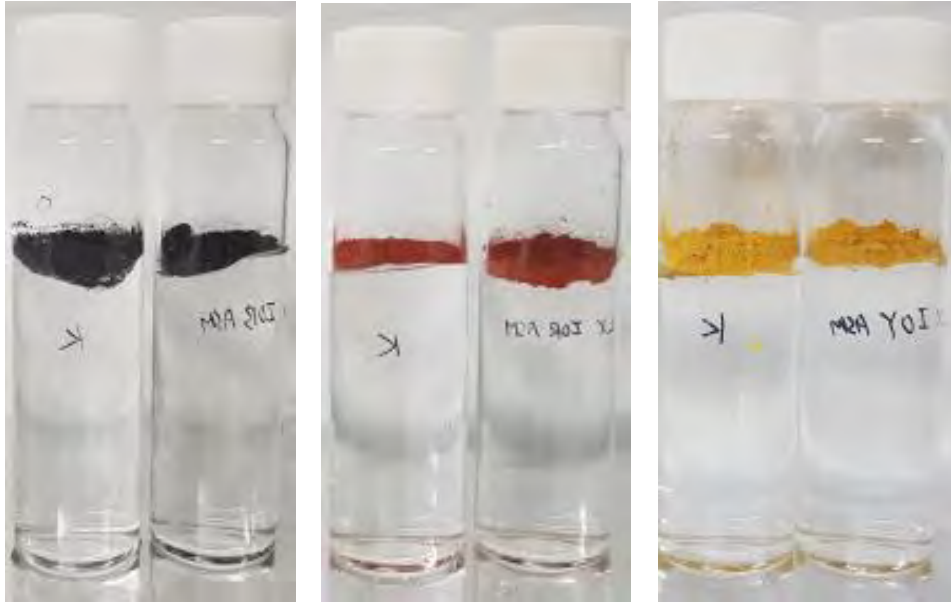
Titanium Dioxide / LX Bianco 200, 200N

# Color Pigment Series



INCI Name	Iron Oxide Yellow Triethoxycaprylylsilane	Iron Oxide Red Triethoxycaprylylsilane	Iron Oxide Black Triethoxycaprylylsilane
SEM			
Product Name	Y-LL ASM / Y-LLP ASM	R-RL ASM / R-RLP ASM	B-BL ASM / B-BLP ASM
Particle Size	2um Max	2um Max	2um Max
Hydrophobicity Test	4 Min	4 Min	4 Min
Oil Compatibility Test	Excellent	Excellent	Excellent
Dispersibility	Excellent	Excellent	Excellent

## Hydrophobicity of competitor



Left : competitor right : LUXON



## Test Method

1. Vial Input D.I water 35g
2. #1 Input Pigment 1~1.5g
3. Sonic BRANSON 5800 ; 5min
4. Hydrophobicity check



**BRANSON 5800**



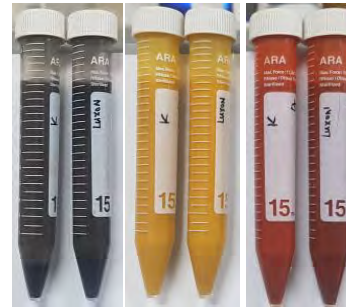
# Oil compatibility TEST

Before Test

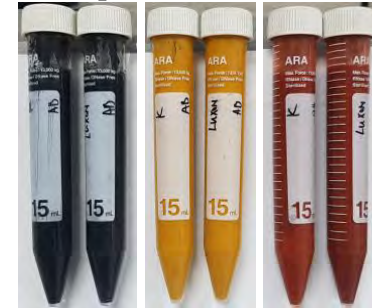
**MCT**



**D5**



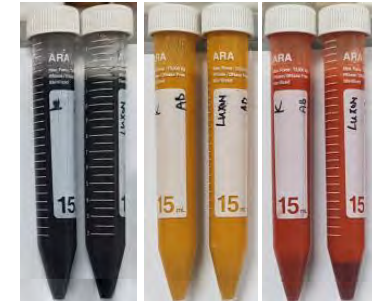
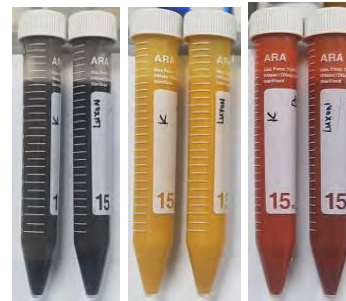
**Alkyl Benzoate**



After Test



Left : competitor right : LUXON



## Test Method

1. Vial Input Oil 25g
2. #1 Input Pigment 2.5g
3. Hand shaking ; 10 times
4. Sonic BRANSON 5800 ; 5min
5. #4 Centrifugal separator(FLETA 4) 2000rpm ; 5min



Excellent Oil Compatibility



## Comparison of Dispersibility



### Test Method

1. Mix raw materials;  
Pigment : TiO<sub>2</sub> ASM : Silicone Oil(D5+D6) = 1:9:10
2. Disperse with a homogenizer; 3000rpm; 5min
3. Applicator test on Hiding Power Chart ; Coating thickness 30 μm



# TiO2 Series



INCI Name	Product Name	Particle Size(μm)	Properties
Titanium Dioxide Triethoxycaprylylsilane	LX Bianco 200	0.20~0.30	Milk skin sensation Excellent affinity to skin
Titanium Dioxide Stearic Acid	LX Bianco 200N	0.20~0.30	Milk skin sensation Excellent affinity to skin
Titanium Dioxide Hydrogen Dimethicone	LX Bianco 200 HD	0.20~0.30	Milk skin sensation Excellent affinity to skin
<b>NEW</b> Titanium Dioxide Poly Methylsilsequioxane	Water Powder Bianco 200	0.20~0.30	Milk skin sensation Excellent affinity to skin
Titanium Dioxide Methicone	LX Bianco 200 MSM	0.20~0.30	Milk skin sensation Excellent affinity to skin

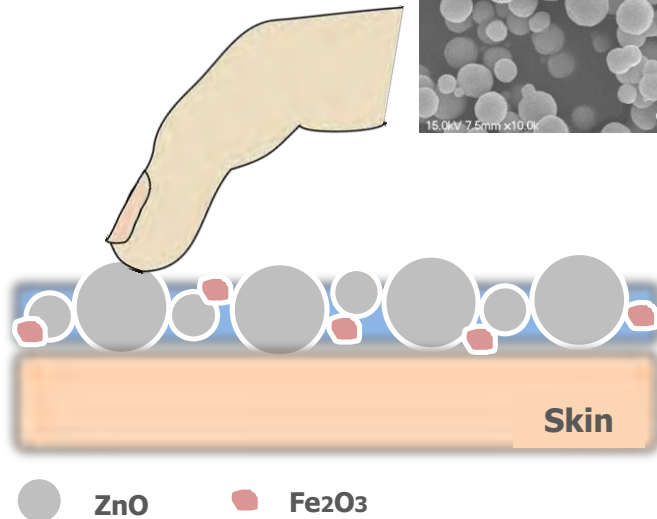
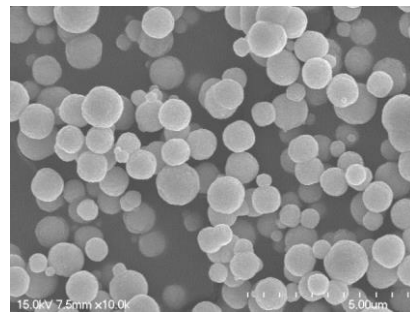
***Application : W/O emulsion Oil dispersion Powders***

# ZnO Pigment Series

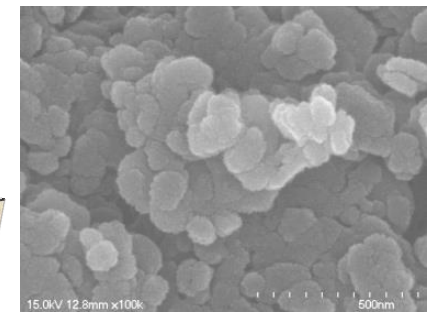
INCI Name	Product Name	Particle Size(μm)	Properties
LX SS-500	Zinc oxide & Silica & Triethoxycaprylsilane	D50 : 300nm ~ 700nm	Milk skin sensation Excellent affinity to skin
LX SS-500N ( SS500NLL )	Zinc oxide & Silica & Stearic acid(* Lauroyl lysine)	D50 : 300nm ~ 700nm    Natural coating	Milk skin sensation Excellent affinity to skin

*Application : W/O emulsion Oil dispersion Powders*

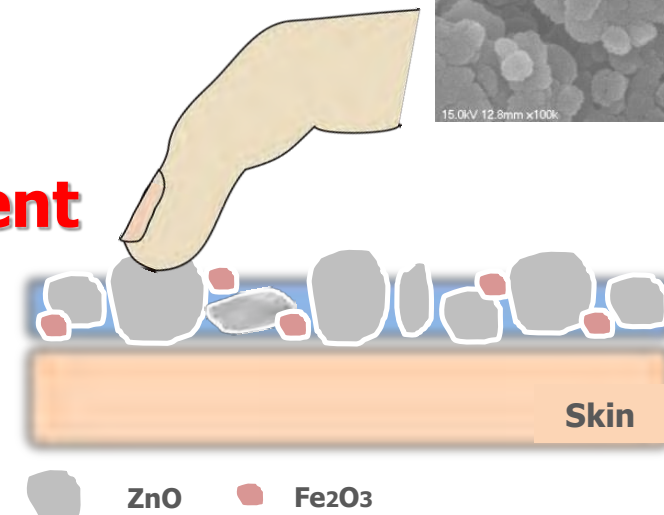
## Our Product Type



## Others Product Type



**It's different**



# Talc Series



INCI Name	Product Name	Particle Size(μm)	Properties
Talc Triethoxycaprylylsilane	LX Talc 13R ASM	9	Milk skin sensation Excellent affinity to skin Powdery skin feel
	LX Talc 46R ASM	13	
Talc Dimethicone	LX Talc 46R DSM	13	Powdery skin feel and milk skin sensation Excellent skin adhesion
Talc Lauroyl Lysine	LX Talc AM	13	Milk skin sensation Excellent skin adhesion Light and moist texture
Talc Theobroma cacao Seed Butter	LX Talc STMC	13	Excellent cream like feeling & spreadability Excellent moisturizing effect
Sericite Dimethiconol Sterate	LX Talc LSA	13	Excellent compressibility

***Application : W/O emulsion Oil dispersion Powders***

# MICA Series



INCI Name	Product Name	Particle Size(μm)	Properties
MICA Triethoxycaprylylsilane	LX MICA ASM	9~11	Milk skin sensation Excellent affinity to skin
MICA Dimethicone	LX MICA DSM	9~11	Powdery skin feel
MICA Lauroly Lysine	LX MICA AM	9~11	Smooth skin sensation Excellent spread ability
MICA Hydrogenated Lecithin	LX MICA LEM	9~11	
MICA Theobroma Cacao Seed Butter	LX MICA STMC	9~11	Excellent cream like feeling & spread ability Excellent moisturizing effect
MICA Dimethiconol Sterate	LX MICA LSA	9~11	Excellent emollient feel & compressibility

***Application : W/O emulsion Oil dispersion Powders***

# Sericite Series



INCI Name	Product Name	Particle Size(μm)	Properties
Sericite Triethoxycaprylylsilane	LX Sericite ASM	9~11	Milk skin sensation Excellent affinity to skin
Sericite Dimethicone	LX Sericite DSM	9~11	Powdery skin feel
Sericite Lauroly Lysine	LX Sericite AM	9~11	Smooth skin sensation Excellent spread ability
Sericite Hydrogenated Lecithin	LX Sericite LEM	9~11	
Sericite Theobroma Cacao Seed Butter	LX Sericite STMC	9~11	Excellent cream like feeling & spread ability Excellent moisturizing effect
Sericite Dimethiconol Sterate	LX Sericite LSA	9~11	Excellent emollient feel & compressibility

***Application : W/O emulsion Oil dispersion Powders***

# Formulation\_Loose Powder



Phase	Trade Name	INCI	%
A	LX TALC 46R ASM	Talc, Triethoxycaprylylsilane	54.30
	LX Sericite ASM	Mica, Triethoxycaprylylsilane	20.00
	SILIA LX7	Silica	10.00
	Dry Flo PC	Aluminum Starch Octenylsuccinate	2.00
	Kaolin 2457	Kaolin	5.00
	ELASTA SP101	Vinyl Dimethicone/Methicone Silsesquioxane Crosspolymer	5.00
	Y-LL ASM	Iron Oxide Yellow, Triethoxycaprylylsilane	0.55
	R-RL ASM	Iron Oxide Red, Triethoxycaprylylsilane	0.20
B-L BL ASM	Iron Oxide Black, Triethoxycaprylylsilane	0.15	
B	Hicos CEH	Cetyl Ethylhexanoate	1.05
	Phyto Squalane	Phyto Squalane	1.60
	spectrastat	Caprylhydroxamic Acid/Caprylyl Glycol/Glycerin	0.15
			100.0

## Ingredient

**Talc**, Zinc Stearate, Magnesium Carbonate, **Silica**, Cetyl Ethylhexanoate, Hydroxyapatite, Tocopheryl Acetate, Methyl Paraben, Fragrance, **Mica**, Titanium Dioxide, Zinc Oxide, Ultramarine, **Yellow Iron oxide, Red Iron oxide, Black Iron Oxide**



## Key Ingredients

**LX TALC ASM**  
**SILIA LX7**  
**LX SERICITE ASM**  
**ELASTA SP101**  
**Y-LL ASM**  
**R-RL ASM**  
**B-BL ASM**



# Formulation\_Powder Pact



Phase	Trade Name	INCI	%
A	LX Talc STMC	Talc, Theobroma Cacao(Cocoa) Seed Butter, Dimethicone	31.64
	LX Sericite STMC	Mica, Theobroma Cacao(Cocoa) Seed Butter, Dimethicone	20.00
	LX Bianco 200	Titanium dioxide, Triethoxycaprylylsilane	16.00
	LX MICA DSM	Mica, Dimethicone	15.00
	ELASTA SP101	Vinyl Dimethicone/Methicone Silsesquioxane Crosspolymer	3.00
	SILIA LX7	Silica	2.00
	Y-LL ASM	Iron Oxide Yellow, Triethoxycaprylylsilane	3.00
	R-RL ASM	Iron Oxide Red, Triethoxycaprylylsilane	0.64
	B-BL ASM	Iron Oxide Black, Triethoxycaprylylsilane	0.32
B	Hicos MCT	Caprylic/Capric Triglyceride	2.90
	SF1000N 100cs	Dimethicone	2.60
	SF 5600Z	Phenyl Trimethicone	2.00
	Parsol MCX	Ethylhexyl Methoxycinnamate	0.40
	spectrastat	Caprylhydroxamic Acid/Caprylyl Glycol/Glycerin	0.30
	Vitamin E acetate	Tocopherol Acetate	0.10
	Perfume	Tocopherol Acetate	0.10
			100.0

## Ingredient

**Talc, Mica, Sericite, Titanium Dioxide,** Diethylhexyl Succinate, **Silica**, Nylon-12, Zinc Stearate, Polyethylene, **Yellow Oxide of Iron,** Hydrogenated Lecithin, Trimyristin, **Red Oxide of Iron,** Ximenia, Americana Seed Oil, Aluminum Hydroxide, Phenoxyethanol, Sodium Dehydroacetate, Caprylyl Glycol, **Black Oxide of Iron,** Tocopherol, Water, Stearic Acid, Aloe Barbadosensis Leaf Juice Powder, Silica Dimethyl Silylate, Sodium Hyaluronate



## Key Ingredients

**LX Talc STMC**  
**LX SERICITE STMC**  
**LX Bianco 200**  
**LX MICA DSM**  
**ELASTA SP101**  
**SILIA LX7**  
**Y-LL ASM**  
**R-RL ASM**  
**B-BL ASM**

# Formulation\_Powder Pact2



Phase	Trade Name	INCI	%
A	<b>LX Sericite STMC</b>	<b>Mica, Theobroma Cacao(Cocoa) Seed Butter, Dimethicone</b>	<b>33.00</b>
	<b>LX Talc STMC</b>	<b>Talc, Theobroma Cacao(Cocoa) Seed Butter, Dimethicone</b>	<b>24.05</b>
	<b>LX Bianco 200</b>	<b>Titanium dioxide, Triethoxycaprylylsilane</b>	<b>18.00</b>
	<b>LX MICA DSM</b>	<b>Mica, Dimethicone</b>	<b>10.00</b>
	<b>SILIA LX7</b>	<b>Silica</b>	<b>2.00</b>
	<b>Y-LL ASM</b>	<b>Iron Oxide Yellow, Triethoxycaprylylsilane</b>	<b>3.50</b>
	<b>R-RL ASM</b>	<b>Iron Oxide Red, Triethoxycaprylylsilane</b>	<b>0.70</b>
	<b>B-BL ASM</b>	<b>Iron Oxide Black, Triethoxycaprylylsilane</b>	<b>0.35</b>
B	Hicos MCT	Caprylic/Capric Triglyceride	2.90
	SF1000N 100cs	Dimethicone	2.60
	SF 5600Z	Phenyl Trimethicone	2.00
	Parsol MCX	Ethylhexyl Methoxycinnamate	0.40
	spectrastat	Caprylhydroxamic Acid/Caprylyl Glycol/Glycerin	0.30
	Vitamin E acetate	Tocopherol Acetate	0.10
	Perfume	Tocopherol Acetate	0.10
			100.0

## Ingredient

**Titanium Dioxide**, Synthetic Fluorophlogopite, **Silica**, Ethylhexyl Methoxycinnamate, Talc, Acrylates/Ethylhexyl Acrylate Copolymer, Boron Nitride, Vinyl Dimethicone/Methicone Silsesquioxane Copolymer, Diphenylsiloxy Phenyl Trimethicone, Dimethicone, Magnesium Myristate, Cucumis Sativus (Cucumber) Fruit Extract, Vitis Vinifera (Grape) Fruit Extract, Citrus Unshiu Peel Extract, Gentiana Lutea Root Extract, Hydrolyzed Rice Bran Extract, Citrus Aurantifolia (Lime) Juice, Petrolatum;Vaseline, C9-15 Fluoroalcohol PhosphateDimethicone/ Vinyl Dimethicone Crosspolymer, Ascorbyl Glucoside, Hydrogen Dimethicone, Microcrystalline Cellulose, Lauroyl Lysine, Trimethylsiloxysilicate, Phytosteryl/Octyldodecyl Lauroyl Glutamate, Palmitoyl Proline, Methicone, Magnesium Palmitoyl Glutamate, Sodium Palmitoyl Sarcosinate, Stearyl Glycyrhettinate, Palmitic Acid, Tocopherol, Saccharide Isomerate, Silica Dimethyl Silylate, Potassium Sorbate, Aluminum Dimyristate, Butylene Glycol;1,3-Butylene Glycol, Water, Alumina, Phenoxyethanol, **Mica,Sericite, Zinc Oxide, Yellow Oxide of Iron ,Red Oxide of Iron, Black Oxide of Iron**

## Key Ingredients



**LX TALC STMC**  
**LX SERICITE STMC**  
**LX Bianco 200**  
**LX MICA DSM**  
**Y-LL ASM**  
**R-RL ASM**  
**B-BL ASM**

# Formulation\_Air Cushion #21



PHASE	RAW MATERIALS	INCI	%
A	TMS 803 50C	Cyclopentasiloxane/ Trimethyl siloxysilicate	16.00
	Microcare e9016	Cetyl PEG/PPG-10/1 Dimethicone	3.00
	KF-6038	Lauryl PEG-9 Polydimethylsiloxylethyl Dimethicone	0.50
	BRB 523	PEG/PPG-18/18 Dimethicone	0.70
	Dehymuls PGPH	Polyglyceryl Hydroxy Stearate	0.30
	PALSOL MCX	Ethylhexyl Methoxycinnamate	5.00
	DC245	Cyclopentasiloxane	5.00
	FZ-3196	Caprylyl methicone	2.00
	<b>LX GEL A20</b>	<b>Dimethicone, Dimethicone/Dimethicone Crosspolymer</b>	<b>2.00</b>
B	BENTON 38V CG	Disteardimonium Hectorite	0.60
	SF0015Z CM56	Cyclopentasiloxane, Cyclohexasiloxane	5.00
C	<b>LX TALC TTS</b>	<b>Talc, Trimethyl siloxysilicate</b>	<b>7.00</b>
	<b>LX MICA AM</b>	<b>Mica, Lauroyl lysine</b>	<b>4.00</b>
	<b>DACHEA EZH TI65 M</b>	<b>Please refer to LUXON MSDS</b>	<b>14.00</b>
	<b>DACHEA EZH IOY 50</b>	<b>Please refer to LUXON MSDS</b>	<b>2.40</b>
	<b>DACHEA EZH IOR 50</b>	<b>Please refer to LUXON MSDS</b>	<b>0.40</b>
	<b>DACHEA EZH IOB 60</b>	<b>Please refer to LUXON MSDS</b>	<b>0.12</b>
D	Water	Water	To 100
	Disodium EDTA	Disodium EDTA	q.a
	Sodium Chloride	Sodium Chloride	1.00
	Preservative	Phenoxyethanol, Caprylyl Glycol, 1,2hexandiol	q.a
	Allantoin	Allantoin	q.a
		<b>MOILUB 1000</b>	<b>Biosaccharide Gum-1</b>

## Ingredient

D.I water, Cyclopentasiloxane, Methyltrimethicone, Butylene glycol, Ethylhexylmethoxycinnamate, Titanium dioxide (CI 77891), Mica, Cyclohexasiloxane, Trimethylsiloxysilicate, PEG-10dimethicone, Disteardimonium hectorite, Zinc oxide, Polyglyceryl-3 polyricinoleate Titanium dioxide, lauryl PEG-9 polydimethylsiloxylethyl dimethicone, Methyl dimethylsiloxysilicate, trimethylsiloxysilicate, Dimethicone, Iron oxide yellow, acrylate / ethylhexyl acrylate / dimethicone methacrylate copolymer, acrylate / stearyl acrylate / dimethicone methacrylate copolymer, Sodium chloride, Aluminum hydroxide, Glycerin, Fragrance, Polysorbate 40, polysilicon-11, Polysorbate 80, Caprylyl glycol, Triethoxycaprylylsilane, Iron oxide red, Lauroyl lysine, Stearic acid, Hydrogenated lecithin, Polyhydroxystearic acid, Ethylhexyl glycerin, Iron oxide Black, Disodium EDTA, Lecithin, Ethylhexyl palmitate, Isostearic acid, Isopropyl palmitate, Polyglyceryl-3 polyricinoleate



## Key Ingredients

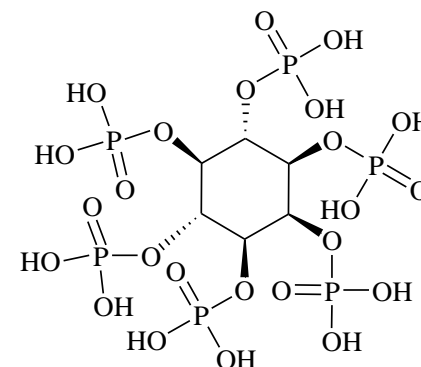
**DACHEA EZH TI65 M**  
**DACHEA EZH IOY 50**  
**DACHEA EZH IOR 50**  
**DACHEA EZH IOB 60**  
**LX TALC TTS**  
**LX MICA AM**  
**LX GEL A20**  
**MOILUB 1000**

# Philicsta Series

	SPHESTA MD 7 ( Standard Silica )	PHILICSTA MD7 ( <b>Special Silica</b> )
Type	Spherical Powder	Spherical Powder
INCI	Silica	Silica & Phytic Acid
CAS. NO	7631-86-9	7631-86-9 & 83-86-3
Particle Size	5.0 ~ 9.0 um	5.0 ~ 9.0 um
Oil Absorption	50 ~ 90	70 ~ 110
Hydrophobicity [LXTM-007]	1.0 max	1.0 max

## Coating Agent

Phytic Acid



C<sub>6</sub>H<sub>18</sub>O<sub>24</sub>P<sub>6</sub>  
 Exact Mass: 659.86  
 Mol. Wt.: 660.04  
 m/e: 659.86 (100.0%), 660.86 (6.5%),  
 661.87 (5.2%), 660.87 (1.1%)  
 C, 10.92; H, 2.75; O, 58.18; P, 28.16

# No Sebum Toner with silica

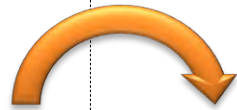
## No Sebum Toner



**IOPE**  
**Pore Reset**  
**Mattifying Toner**

## All ingredients

Water, Ethanol, Propanediol, Glycerine, 1,2 hexanediol,  
Green tea extract, **Silica**, Bis-peg 18 methylethyldimethylsilane,  
PG-60 Hydrogenated Castor Oil, Butylene Glycol, Small Indium  
magnesium silicate, ethylhexyl glycerin, calcium chloride,  
2Na EDTA, fragrance



**Silica layer**

## Silica function

- ✓ Easy daily sebum care with powder toner
- ✓ Sensory additive
- ✓ Enhanced stability in O/W

# No Sebum Toner with silica

No Sebum Toner

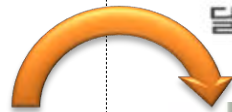


Pong Dang  
Daily Clarifying  
Facial Toner

All ingredients

**Silica**

정제수, 다마스쿠즈장미꽃수, 프로판다이올, 부틸렌글라이콜, 실리카, 1,2-헥산다이올, C12-14파레스-7, C12-14파레스-12, 소듐시트레이트, 에틸헥실글리세린, 시트릭애씨드, 멕시칸치아씨추출물, 병풀추출물, 녹차추출물, 약모밀추출물, 에우파토리아짚신나물추출물, 스페인감초뿌리추출물, 알란토인, 베르가모트오일, 해바라기씨오일, 소엽잎추출물, 다이소뮴이디티에이, 흰무늬영경귀씨추출물, 센티드제라늄꽃오일, 티트리잎추출물, 흰버드나무껍질추출물, 다마스쿠즈장미꽃오일, 흰목이버섯추출물, 편백잎추출물, 오레가노잎추출물, 프로폴리스추출물, 닥나무뿌리추출물, 눈빛송마추출물, 락토바실러스/콩발효추출물, 쇠비름추출물, 황금추출물, 육계나무껍질추출물, 펜틸렌글라이콜, 달맞이꽃추출물, 마데카소사이드



**Silica layer**

## Silica function

- ✓ Easy daily sebum care with powder toner
- ✓ Sensory additive
- ✓ Enhanced stability in O/W

# Our Proposal of Sebum Control TONER



## Feature

Moist Feeling, Natural tone up

PHASE	Ingredient	INCI	%
A	D.I.WATER	Water	TO100
	MOILUB 701A	PEG/PPG-17/6 Copolymer	10.00
	ZEMEA PROPANDIOL	PROPANDIOL	5.00
	LX MOILUB 1000	Biosaccharide Gum-1	2.00
	NIKKOL BT-9, 10	C12-14 Pareth-9, C12-14 Pareth-12	p.S
	Sodium Citrate	Sodium Citrate	
B	PHILICSTA MD7	Silica, Phytic Acid	10.00
C	Natureclean RP9	Raspberry Ketone/Propanediol	2.50

## Standard Operating Procedures

1. Heat phase A to 80°C
2. After phase B, put into phase A  
Homo mix at 1500RPM for 10 min
3. Put C-phase at 45°C
- 4 Finish after 35 °C cooling



## Key Ingredients our products

**PHILICSTA MD7**

Commend

LX MOILUB 1000

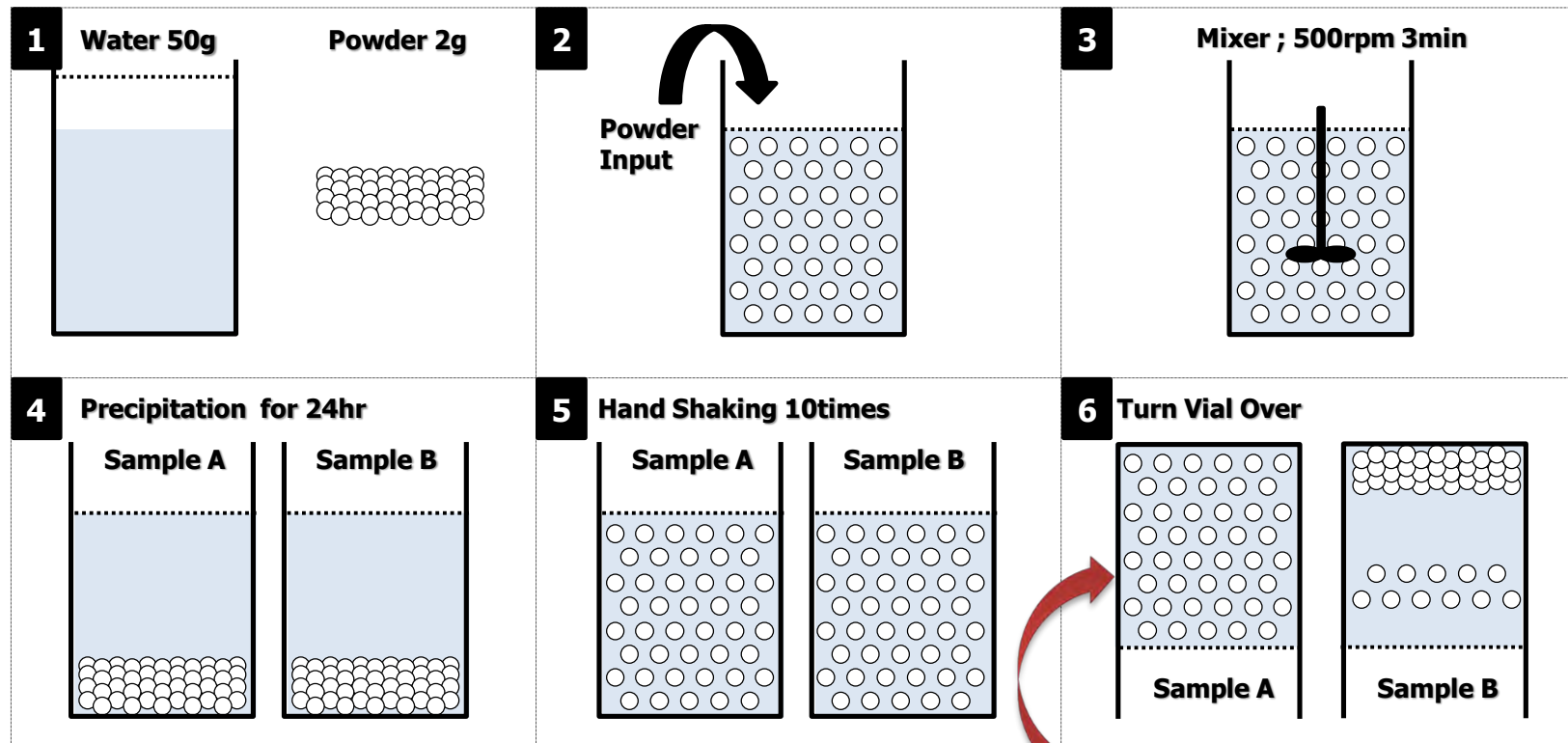
MOILUB 701A



# Redispersibility test of Water

## Dispersion Test Method

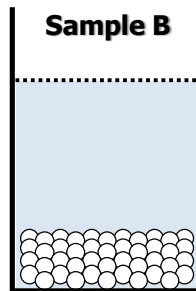
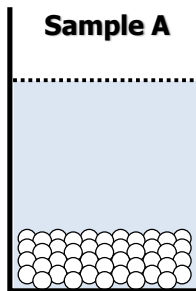
1. Water : 60g + 3g ; vial 100ml
2. Mixer ( 500rpm; 3min )
3. Precipitation for 24hr
4. Shaking 10times
5. Turn vial over
6. Check the redispersibility



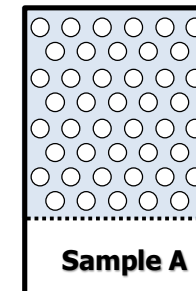
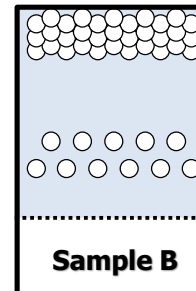
**Excellent  
Redispersibility**

# Test Result of redispersibility Water

Precipitation for 24hr



After Shaking 10times, Turn over



**Excellent Redispersibility**

# Philicsta Pigment Series

# Others Our Proposal



	PHILICSTA WHITE	PHILICSTA YELLOW	PHILICSTA RED	PHILICSTA BLACK
Type	TiO2	Iron Oxide	Iron Oxide	Iron Oxide
INCI	Titanium Dioxide & Phytic Acid	Iron Oxide Yellow & Phytic Acid	Iron Oxide RED & Phytic Acid	Iron Oxide Black & Phytic Acid
CAS. NO	13463-67-7 & 83-86-3	51274-00-1 & 83-86-3	1309-37-1 & 83-86-3	12227-89-3 & 83-86-3
Particle Size	250nm	2um max	2um max	2um max
Oil Absorption	20 ~ 50	70 ~ 110	20 ~ 50	20 ~ 50
Hydrophobicity [LXTM-007]	1.0 max	1.0 max	1.0 max	1.0 max

## Application

Color cosmetic


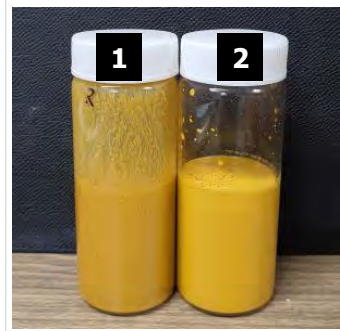

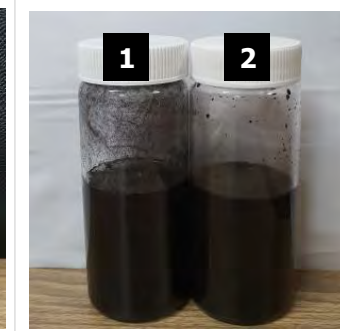








Eyeshadow

Easy dispersible without grinding

Enhanced stability in O/W

# Test Result of redispersibility in water

**1** : Raw Material    **2** : Philicsta Series

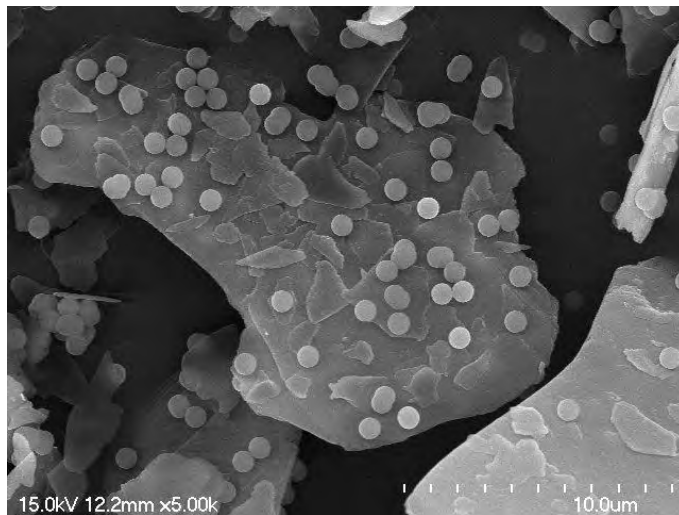
<p>In put powder</p> <p>500rpm; 3min</p>				
<p>Precipitation for 24hr</p>				
<p>Hand Shaking 10times Turn Over</p>				

**Excellent  
Redispersibility**

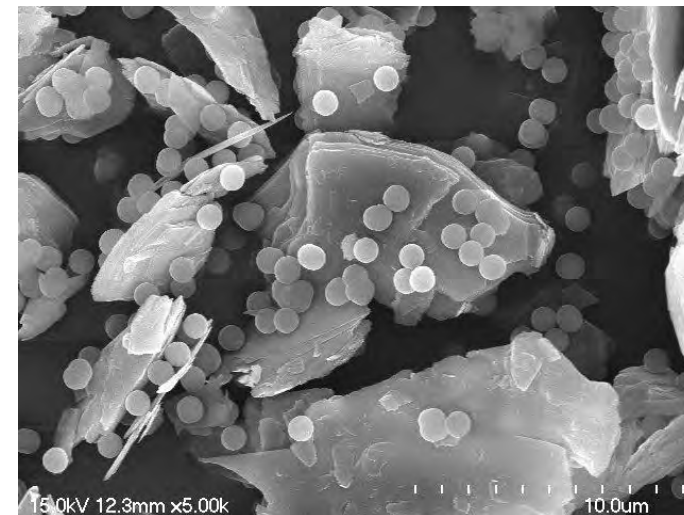
# Complex Powder

Grade	Descriptions	Our proposal	Avg. Particle size(nm)	Oil Absorption (ml/100g)
LX Mimosil	Mica & Silica	Natural skin tone for skin care & make up	10 ~ 16	80 ~ 120
LX Tamisil	Talc 46R % Silica		8 ~ 15	30 ~ 70

**LX Mimosil**

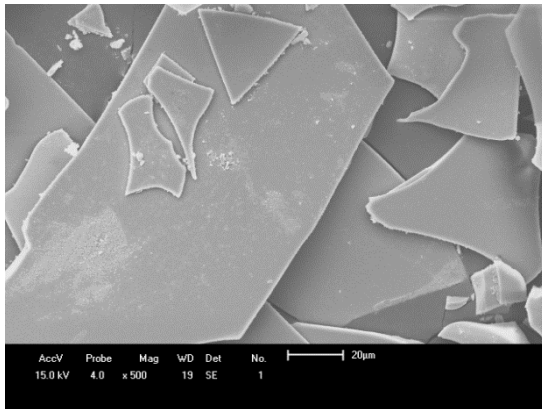
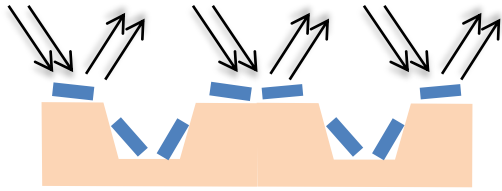


**LX Tamisil**



# Why Complex Powder

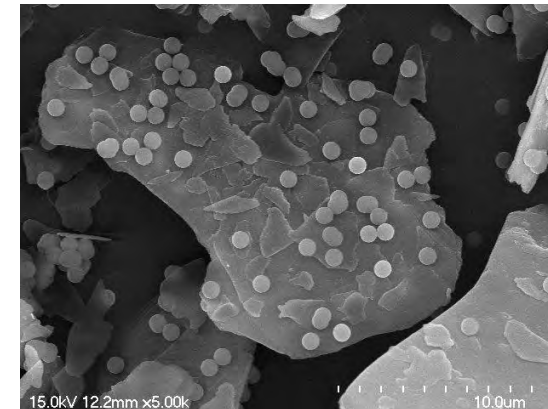
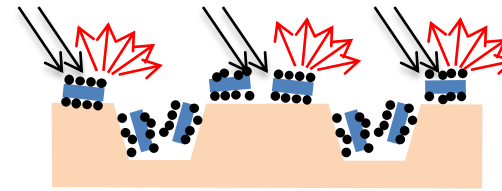
## Before complex



### Before

- General reflection
- Luster 2D substrate
- Light reflection

## After complex



### After

- Less visible skin imperfection
- Natural skin tone
- Light transmitting
- Scattering, Reduce contrast

## Mica



**Good**

for skin care and make up

## Talc 46R



**Natural skin tone**

for skin care and make up



# Pigment Dispersion Technology

*Version 3.2*



For more information

Website : [www.luxonkorea.co.kr](http://www.luxonkorea.co.kr)

E-Mail : [sales01@luxonkorea.co.kr](mailto:sales01@luxonkorea.co.kr)

Office telephone: +82-31-943-7751

Cellular Phone: +82-10-9869-7751

# Color Dispersion Series



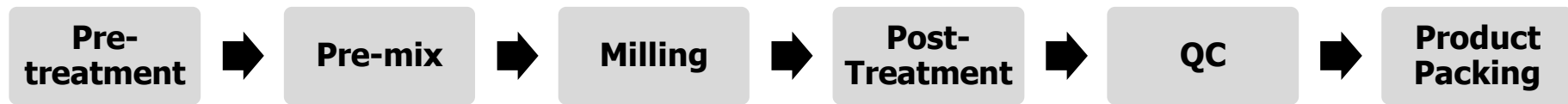
## Color Dispersion Series

	Trade Name	INCI NAME	Character
Pigment Dispersion	EZH T170	Titanium Dioxide, Butylene Glycol, Poly sorbate, Triethoxycaprylylsilane, Alumina, Silica, Hydeogened Lecithin.	TiO2 70%
	EZ TI50	Titanium Dioxide & Butylene Glycol & Poly sorbate & Triethoxycaprylylsilane & Alumina & Silica & Rosin & Lecithin.	TiO2 50%
	EZH IOY50	I.O.Yellow, Propylene Glycol, Butylene Glycol, Poly sorbate, Triethoxycaprylylsilane, Silica, Hydeogened Lecithin.	Iron Oxide Yellow 50%
	EZ IOY40	I.O.Yellow & Propylene Glycol & Butylene Glycol & Poly sorbate & Triethoxycaprylylsilane & Silica & Rosin	Iron Oxide Yellow 40%
	EZH IOR55	I.O.Red, Propylene Glycol, Butylene Glycol, Poly sorbate, Triethoxycaprylylsilane, Hydeogened Lecithin.	Iron Oxide Red 55%
	EZ IOR40	I.O.Red & Propylene Glycol & Butylene Glycol & Poly sorbate & Triethoxycaprylylsilane & Rosin	Iron Oxide Red 40%
	EZH IOB60	I.O.Black, Propylene Glycol, Butylene Glycol, Poly sorbate, Triethoxycaprylylsilane, Silica, Hydeogened Lecithin.	Iron Oxide Black 60%
	EZH IOB40	I.O.Black & Propylene Glycol & Butylene Glycol & Poly sorbate & Triethoxycaprylylsilane & Silica & Rosin	Iron Oxide Black 40%





# Dispersion processing and SPEC



## Dispersion Technology



## Dispersion For **High** Viscosity Formulation

Product Name	Color	%	INCI	Viscosity
EZH TI70		70	Titanium Dioxide, Butylene Glycol, Poly sorbate, Triethoxycaprylylsilane, Alumina, Silica, <i>Hydrogenated Lecithin.</i>	PASTE
EZ TI50		50	Titanium Dioxide, Water, Butylene Glycol, Polysorbate 80, Aluminum Hydroxide, 1,2-Hexanediol, Rosin	LIQUID
EZH IOY50		50	I.O.Yellow, Propylene Glycol, Butylene Glycol, Poly sorbate, Triethoxycaprylylsilane, Silica, <i>Hydrogenated Lecithin.</i>	PASTE
EZ IOY40		40	I.O.Yellow, Water, Butylene Glycol, Polysorbate 60, Aluminum Hydroxide, 1,2-Hexanediol, Rosin	LIQUID
EZH IOR55		55	I.O.Red, Propylene Glycol, Butylene Glycol, Poly sorbate, Triethoxycaprylylsilane, <i>Hydrogenated Lecithin.</i>	PASTE
EZ IOR40		40	I.O.Red, Water, Butylene Glycol, Polysorbate 60, Aluminum Hydroxide, 1,2-Hexanediol, Rosin	LIQUID
EZH IOB60		60	I.O.Black, Propylene Glycol, Butylene Glycol, Poly sorbate, Triethoxycaprylylsilane, Silica, <i>Hydrogenated Lecithin.</i>	PASTE
EZ IOB40		40	I.O.Black, Water, Butylene Glycol, Polysorbate 60, Aluminum Hydroxide, 1,2-Hexanediol, Rosin	LIQUID

Recommended : W/S, W/O or O/W, Foundation, Cushion BB, BB & CC cream, Tone-Up Cream etc,

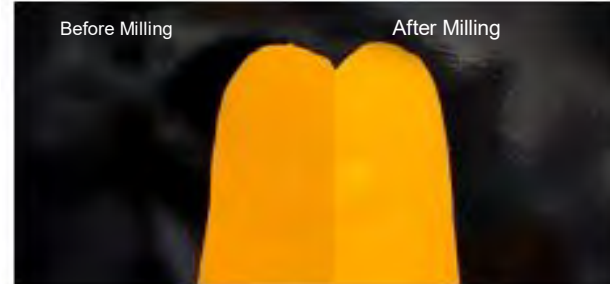
## Compare Test of Before and After Milling

Coating Surface Compare



\*After milling, the coating surface is more smoother

Color Compare



\*After milling, the color became closer to the original color.

## Water Solubility Test of Dispersion



EZIOR45 (Iron oxide red)  
dropped in D.I water



Mixing



Mixing



Completely dissolved

# Dispersion Stability Testing 1

## Centrifugal separator test



### Test Condition

4000 RPM ; 10 Mins



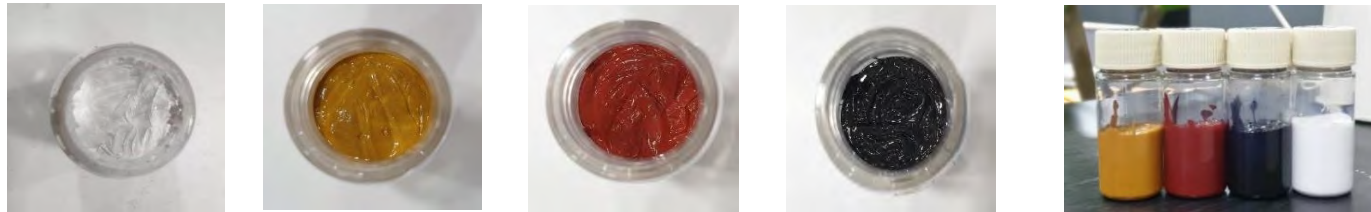


## Test Condition

Ambient temperature (20~25°C)  
For 4 months



2018.11.08



2019.01.30



2019.02.18



# Formulation\_ESTEE LAUDER Double Wear Stay-in Place Make up



## Double Make-up Foundation ( SPF 30 PA++ )

PHASE	RAW MATERIALS	INCI	%
A	TMS 803 50C	Cyclopentasiloxane/ Trimethyl siloxysilicate	25.00
	Microcare e9016	Cetyl PEG/PPG-10/1 Dimethicone	3.50
	REODOL AO-15	Sorbitan Sesquioleate	1.50
B	DC 245	Cyclopentasiloxane	5.00
	BENTON 38V CG	Disteardimonium Hectorite	1.50
C	LX MICA DSM	Mica, Dimethicone	1.00
	LX PMSQ P50	Polymethylsilsesquioxane	2.00
	SPHESTA MD 7	Silica	2.00
D	DACHE EZH Ti70	Please refer to MSDS	18.00
	DACHE EZH IOY50	Please refer to MSDS	2.60
	DACHE EZH IOR55	Please refer to MSDS	0.70
	DACHE EZH IOB60	Please refer to MSDS	0.15
E	Water	Water	To 100
	Disodium EDTA	Disodium EDTA	0.02
	Sodium Chloride	Sodium Chloride	1.50
	LX MOILUB 1000	Biosaccharide Gum-1	0.50
	Preservative	Phenoxyethanol, Caprylyl Glycol, 1,2hexandiol	2.00
	Allantoin	Allantoin	0.02
	D-Panthenol	D-Panthenol	0.02

Lab No.: HTT0828FD-LA01

## Ingredients:

Water/Aqua/Eau, Cyclopentasiloxane, Trimethylsiloxysilicate, Butylene Glycol, PEG/PPG-18/18 Dimethicone, Polyglyceryl-3 Diisostearate, Magnesium Sulfate, Tribehenin, Titanium Dioxide, Tocopheryl Acetate, Methicone, Polymethylsilsesquioxane, Laureth-7, Disteardimonium Hectorite, Cellulose Gum, Propylene Carbonate, Xanthan Gum, Pentaerythryl Tetra-Di-T-Butyl Hydroxyhydrocinnamate, Alumina, Phenoxyethanol, Sodium Dehydroacetate, [+/- Titanium Dioxide (Ci 77891), Mica, Iron Oxides (Ci 77491, Ci 77492, Ci 77499)]



## Key Ingredients of LUXON products



DACHE EZH Ti70  
 DACHE EZH IOY50  
 DACHE EZH IOR55  
 DACHE EZH IOB60  
 LX MICA DSM  
 LX PMSQ P50  
 SPHESTA MD 7  
 MD 7

Recommend use with  
 LX MOILUB 1000

# Formulation\_HERA Black Foundation



## Moisture fit Foundation ( SPF 15 PA+ )

PHASE	RAW MATERIALS	INCI	%
A	TMS 803 50C	Cyclopentasiloxane/ Trimethyl siloxysilicate	20.00
	Microcare e9016	Cetyl PEG/PPG-10/1 Dimethicone	3.50
	REODOL AO-15	Sorbitan Sesquioleate	2.00
	Parsol MCX	Ethylhexyl Methoxycinnamate	5.00
B	Dowsil F2-3196	Caprylyl Methicone	5.00
	BENTON 38V CG	Disteardimonium Hectorite	0.50
C	LX MICA AM	Mica, Lauroyl lysine	1.00
	LX PMSQ P50	Polymethylsilsesquioxane	2.00
	SPHESTA MD 7	Silica	2.00
D	DACHE EZH TI70	Please refer to MSDS	25.00
	DACHE EZH IOY50	Please refer to MSDS	5.60
	DACHE EZH IOR55	Please refer to MSDS	1.60
	DACHE EZH IOB60	Please refer to MSDS	0.2
E	Water	Water	To 100
	Disodium EDTA	Disodium EDTA	0.02
	Sodium Chloride	Sodium Chloride	1.50
	LX MOILUB 1000	Biosaccharide Gum-1	0.50
	Preservative	Phenoxyethanol, Caprylyl Glycol, 1,2hexandiol	2.00
	Allantoin	Allantoin	0.02
	D-Panthenol	D-Panthenol	0.02

Lab No.: HTT0828FD-LB01

## Ingredients:

Water / Aqua / Eau, Titanium Dioxide (Ci 77891), Cyclopentasiloxane, Caprylyl Methicone, Methyl Trimethicone, Ethylhexyl Methoxycinnamate, Propanediol, Iron Oxides (Ci 77492), Trimethylsiloxysilicate, Peg-10 Dimethicone, Polymethyl Methacrylate, Silica, Hexyl Laurate, Cetyl Peg/Ppg-10/1 Dimethicone, Polyglyceryl-4 Isostearate, Acrylates/Ethylhexyl Acrylate/Dimethicone Methacrylate Copolymer, Disteardimonium Hectorite, Cyclohexasiloxane, Sodium Chloride, Isododecane, 1, 2-Hexanediol, Iron Oxides (Ci 77491), Isopropyl Titanium Triisostearate, Pentylene Glycol, Mica, Acrylates/Dimethicone Copolymer, Aluminum Hydroxide, Fragrance / Parfum, Bis-Peg-15 Dimethicone/Ipdi Copolymer, Caprylyl Glycol, Peg-2 Soyamine, Glyceryl Caprylate, Disodium Edta, Benzyl Salicylate, Iron Oxides (Ci 77499), Lauroyl Lysine, Hydroxycitronellal, Alpha-Isomethyl Ionone, Ethylhexyl Palmitate, Rosa Damascena Flower Water, Linalool, Limonene, Hexyl Cinnamal, Butylene Glycol, Silica Dimethyl Silylate, Sodium Hyaluronate, Pentaerythrityl Tetra-Di-T-Butyl Hydroxyhydrocinnamate, Phenoxyethanol, Rubus Fruticosus (Blackberry) Fruit Extract, Hexylene Glycol, Ethylhexylglycerin, Fragaria Vesca (Strawberry) Leaf Extract.



## Key Ingredients of LUXON products

- DACHE EZH Ti70
- DACHE EZH IOY50
- DACHE EZH IOR55
- DACHE EZH IOB60
- LX MICA DSM
- LX PMSQ P50
- SPHESTA MD 7

Recommend use with  
LX MOILUB 1000



# SUNCARE Mineral Technology

*Version 3.2*



For more information

Website : [www.luxonkorea.co.kr](http://www.luxonkorea.co.kr)

E-Mail : [sales01@luxonkorea.co.kr](mailto:sales01@luxonkorea.co.kr)

Office telephone: +82-31-943-7751

Cellular Phone: +82-10-9869-7751

# UV Filter Dispersion Series



## ZnO Dispersion Series

	Trade Name	INCI NAME	Character
ZnO Dispersion	LX DZN(DZ) 40 AB	ZnO/C12~15 Alkyl Benzoate/Polyhydroxy stearic acid / Triethoxycaprylylsilane	30nm(150nm) ZnO 40%
	LX DZN(DZ) 705	ZnO & Cyclopentasiloxane & PEG-10 Dimethicone & Triethoxycaprylylsilane	30nm(150nm) ZnO 70%
	LX DZN(DZ) 65C	ZnO & Dicaprylyl carbonate & Polyhydroxy stearic acid & Triethoxycaprylylsilane	30nm(150nm) ZnO 65%
	LX DZN(DZ) 65CC	ZnO & Coco caprylate/caprates & Polyhydroxy stearic acid & Triethoxycaprylylsilane	30nm(150nm) ZnO 65%
	LX DZN(DZ) 65AB	ZnO & C12-15 Alkyl Benzoate & Polyhydroxy stearic acid & Triethoxycaprylylsilane	30nm(150nm) ZnO 65%
	LX DZN(DZ) 65W	ZnO & Water & 1,3-Butylene Glycol & Polysorbate 60 & Oleth 10 & 1,2-Hexanediol & Rosin & Triethoxycaprylylsilane	30nm(150nm) ZnO 65%

## TiO2 Dispersion Series

	Trade Name	INCI NAME	Character
TiO2 Dispersion	LX DTN 405	TiO2 & Cyclopentasiloxane & PEG-10 Dimethicone & Stearic acid & Aluminum Hydroxide	15nm TiO2 40%
	LX DTN 555	TiO2 & Cyclopentasiloxane & PEG-10 Dimethicone & Stearic acid & Aluminum Hydroxide	15nm TiO2 55%
	LX DTN 40 AB	TiO2/Alumina/C12~15 Alkyl Benzoate/ Polyhydroxy stearic acid/Aluminum stearate/Alumina	15nm TiO2 40%
	LX DT 605	TiO2 & Cyclopentasiloxane & PEG-10 Dimethicone & Triethoxycaprylylsilane & Silica	30nm TiO2 60%
	LX DT 60C	TiO2 & Dicaprylyl carbonate & Polyhydroxy stearic acid & Triethoxycaprylylsilane & Silica	30nm TiO2 60%
	LX DT 60CC	TiO2 & Coco caprylate/caprates & Polyhydroxy stearic acid & Triethoxycaprylylsilane & Silica	30nm TiO2 60%
	LX DT 60AB	TiO2 & C12-15 Alkyl Benzoate & Polyhydroxy stearic acid & Triethoxycaprylylsilane & Silica	30nm TiO2 60%
	LX DT 55W	TiO2 & Water & 1,3-Butylene Glycol & Polysorbate 60 & Oleth 10 & 1,2-Hexanediol & Rosin & Triethoxycaprylylsilane & Silica	30nm TiO2 55%

# UV Filter Series



## ZnO Series

	Trade Name	INCI NAME	Character
ZnO	LX-HPA 30	Zinc Oxide & Triethoxycaprylylsilane	D50 : 30nm ~ 60nm
	LX-HPA 30N (* 30NL, 30NLL)	Zinc Oxide & Silica & Stearic acid (* Hydrogenated Lecithin or Lauroyl lysine)	D50 : 30nm ~ 60nm    Natural coating
	LX-HPA 150	Zinc Oxide & Triethoxycaprylylsilane	D50 : 100nm ~ 200nm
	LX-HPA 150N (* 150NL, 150NLL)	Zinc Oxide & Silica & Stearic acid (* Hydrogenated Lecithin or Lauroyl lysine)	D50 : 100nm ~ 200nm    Natural coating
	LX-SS 150	Zinc Oxide & Silica & Triethoxycaprylylsilane	D50 : 100nm ~ 200nm
	LX-SS150N (* SS150NLL )	Zinc oxide & Silica & Stearic acid(* Lauroyl lysine)	D50 : 100nm ~ 200nm    Natural coating
	LX-SS 500	Zinc oxide & Silica & Triethoxycaprylylsilane	D50 : 300nm ~ 700nm
	LX-SS 500N ( SS500NLL )	Zinc oxide & Silica & Stearic acid(* Lauroyl lysine)	D50 : 300nm ~ 700nm    Natural coating

## TiO2 Series

	Trade Name	INCI NAME	Character
TiO2	LX-100TV	Titanium Dioxide & Aluminum Hydroxide & Stearic acid	D1 : 0.03 Min, D50 : 0.04 Min    Natural coating
	NT 95	Titanium Dioxide & Aluminum Hydroxide & Stearic acid	D1 : 0.03 Min, D50 : 0.04 Min    Natural coating
	Micro Bianco	Titanium Dioxide & Silica & Triethoxycaprylylsilane	D50 : 30nm ~ 60nm
	Micro Bianco N (*NL, NLL)	Titanium Dioxide & Silica & Stearic acid (* Hydrogenated Lecithin or Lauroyl lysine)	D50 : 30nm ~ 60nm    Natural coating
	LX Bianco 200	Titanium Dioxide & Aluminum Hydroxide & Triethoxycaprylylsilane	D50 : 200nm ~ 300nm
	LX Bianco 200N (*NL, NLL)	Titanium Dioxide & Aluminum Hydroxide & Stearic acid (* Hydrogenated Lecithin or Lauroyl lysine)	D50 : 200nm ~ 300nm    Natural coating



The coral reefs in the sea exposed to the ingredients in question gradually turn white and die.

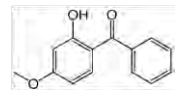


Data source : the inertia & <http://www.mrtt.news>

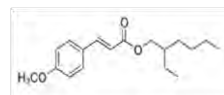


**West City**  
**Hawaii**

Oxybenzone



Octinoxate



## Shiseido, the no.1 of suncare brand



 **Shiseido Perfect UV Protector S**  
WetForce  
Mineral Only

## Ingredient

Dimethicone, **Zinc Oxide, Titanium Dioxide**, Water, Butylene Glycol, Glycerin, Diisopropyl sebacate, **Polymethyl Methacrylate**, Hydrogenated Polydecene, PEG-10 Dimethicone, PEG-9 Polydimethylsiloxyethyl Dimethicone, Cyclomethicone, Bis-butyldimethicone polyglyceryl-3, Aluminum distearate, Aluminum hydroxide, Hydrogen Dimethicone, **Isostearic Acid**, Trimethylsiloxysilicate, PEG-6, PEG-32, **PEG/PPG-14/7 dimethyl ether**, Distardimonium Hectorite, Hydrated silica, Sodium metaphosphate, Triethoxycaprylylsilane, Stearic Acid, Dextrin palmitate, Scutellaria Baicalensis Root Extract, Distearylidimonium chloride, Rubus Idaeus Fruit Extract, Tocopherol, Aloe Barbadosensis Leaf Juice, Thymus Serpillum Leaf Extract, Syzygium Jambos Leaf Extract



## Key Ingredients

- 1. Zinc Oxide**
  - 2. Titanium Dioxide**
  - 3. Film former : Isostearic Acid,  
PEG/PPG-14/7 dimethyl ether**
- Sensory additive : Poly Methyl Methacrylate

# **OVERVIEW**

## **LUXON SUN CARE products**

### **Zinc Oxide**

#### 1. ZnO Dispersion

LX DZN(DZ) 40 AB  
LX DZN(DZ) 705  
LX DZN(DZ) 65C  
LX DZN(DZ) 65CC  
LX DZN(DZ) 65AB  
LX DZN(DZ) 65W

#### 2. ZnO Powder

LX-HPA 30  
LX-HPA 30N (\* 30NL, 30NLL)  
LX-HPA 150  
LX-HPA 150N (\* 150NL, 150NLL)  
LX-SS 150  
LX-SS150N (\* SS150NLL )  
LX-SS 500  
LX-SS 500N (\*SS500NLL )

### **Titanium Dioxide**

#### 3. TiO<sub>2</sub> Dispersion

LX DTN 405  
LX DTN 555  
LX DTN 40 AB  
LX DT 605  
LX DT 60C  
LX DT 60CC  
LX DT 60AB  
LX DT 55W

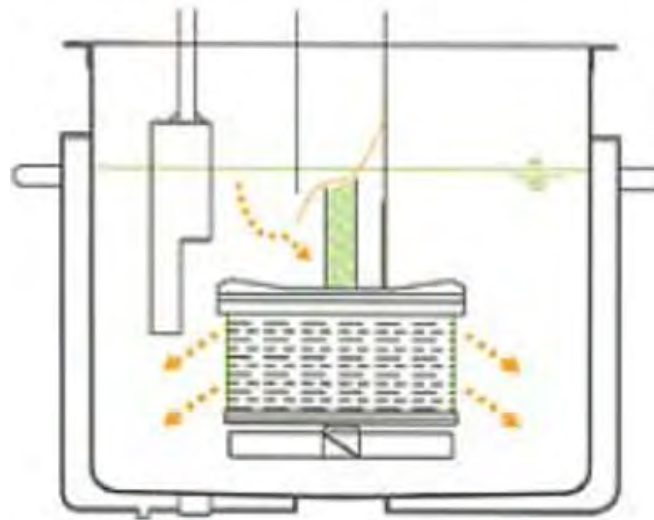
#### 4. TiO<sub>2</sub> Powder

LX-100TV  
Micro Bianco  
Micro Bianco N(\*NLL)  
LX Bianco 200  
LX Bianco 200N(\*NLL)  
LX TIS – 35  
LX TIS – 35ASM

Uniformity of components

## ZnO Dispersion

AB Oil base 30 or 150nm ZnO  
D5 Oil base 30 or 150nm ZnO  
CC Oil base 30 or 150nm ZnO  
DC Oil base 30 or 150nm ZnO  
Water base 30 or 150nm ZnO



## TiO<sub>2</sub> Dispersion

AB Oil base 20 or 30nm TiO<sub>2</sub>  
D5 Oil base 20 or 30nm TiO<sub>2</sub>  
CC Oil base 30nm TiO<sub>2</sub>  
DC Oil base 30nm TiO<sub>2</sub>  
Water base 30nm TiO<sub>2</sub>

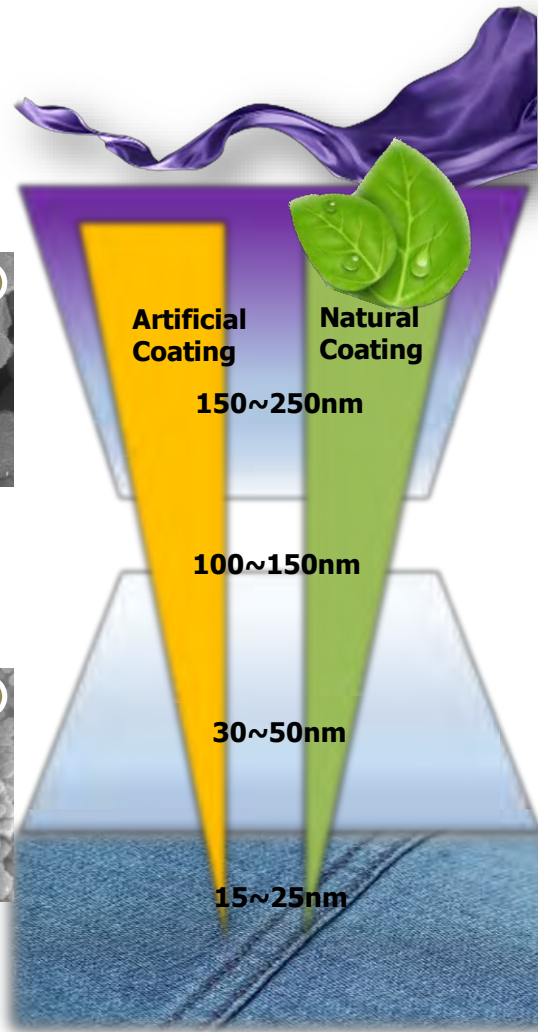
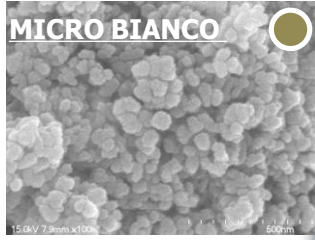
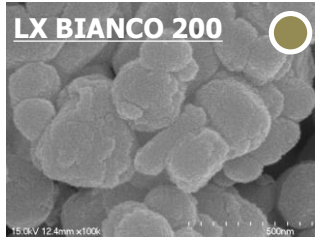
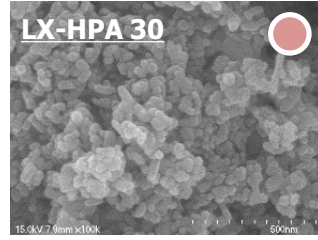
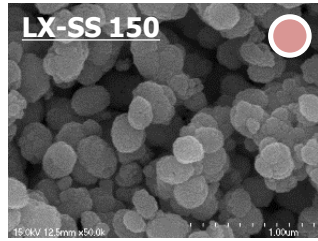
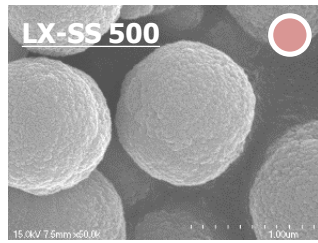
Enhanced UV protection

Increased transparency

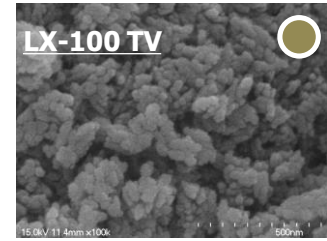
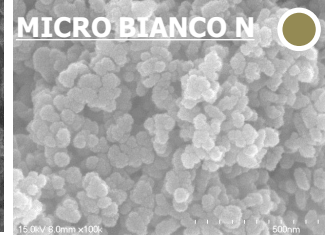
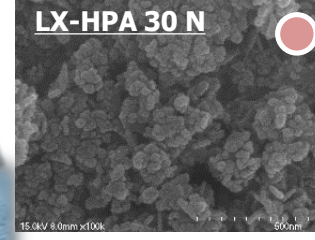
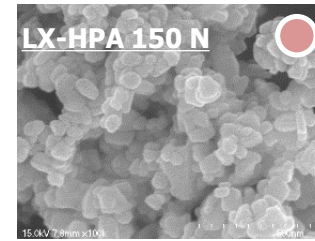
\* The measurement chart may vary depending on the surface treatment.

[http://www.armstec.co.kr/bbs/content.php?co\\_id=sub020201](http://www.armstec.co.kr/bbs/content.php?co_id=sub020201)

# LUXON ZINC OXIDE



< Coating Agent 4% >



- TiO<sub>2</sub> Powder
- ZnO Powder

Patent Number: KR 10-20347830000, KR 10-1994980, CN ZL201911059904.0



# LX-Dispersion

## LUXON SUN CARE products

### Zinc Oxide

#### 1. ZnO Dispersion

**LX DZN(DZ) 40 AB**  
**LX DZN(DZ) 705**  
**LX DZN(DZ) 65C**  
**LX DZN(DZ) 65CC**  
**LX DZN(DZ) 65AB**  
**LX DZN(DZ) 65W**

#### 2. ZnO Powder

LX-HPA 30  
LX-HPA 30N (\* 30NL, 30NLL)  
LX-HPA 150  
LX-HPA 150N (\* 150NL, 150NLL)  
LX-SS 150  
LX-SS150N (\* SS150NLL )  
LX-SS 500  
LX-SS 500N (\*SS500NLL )

### Titanium Dioxide

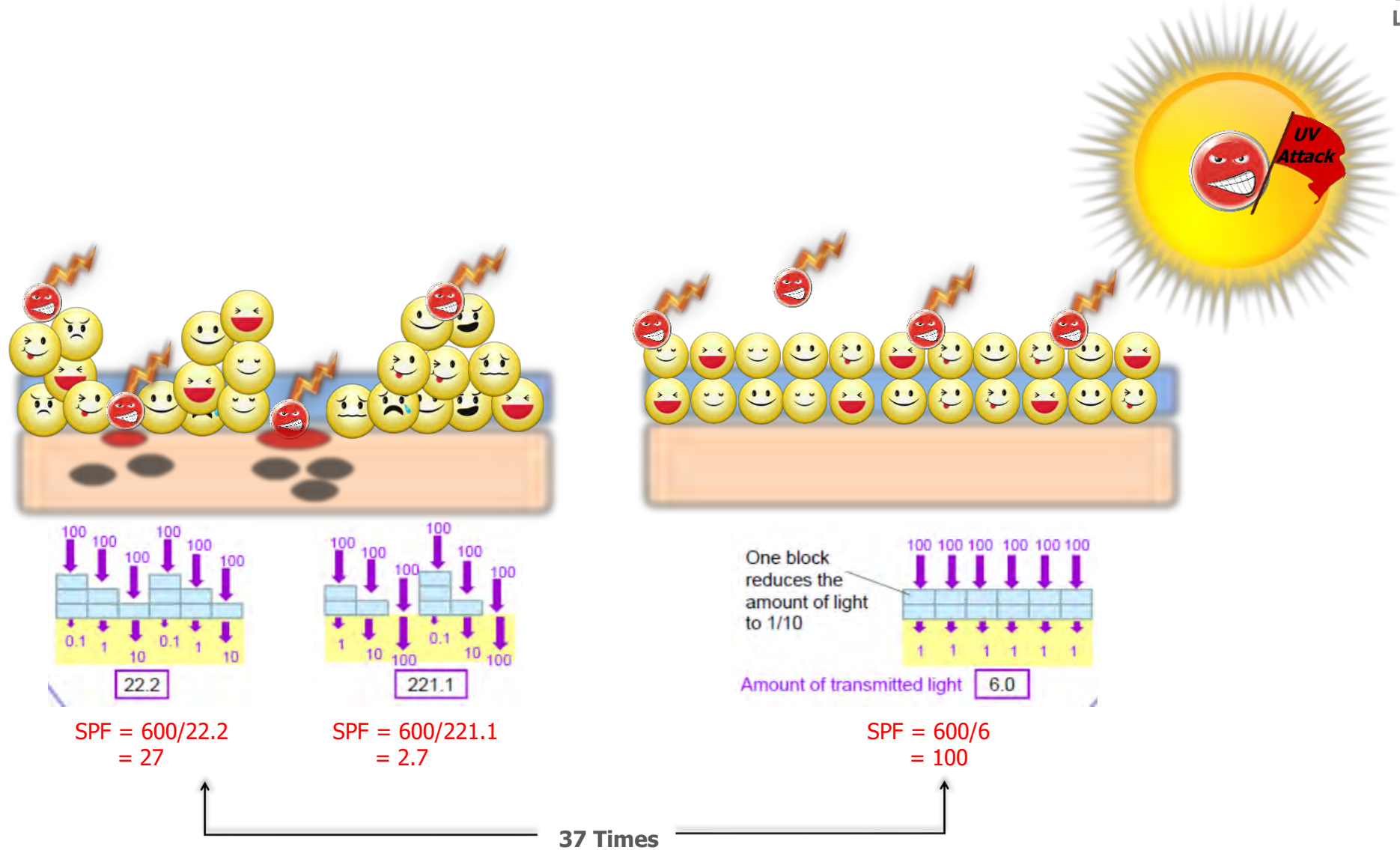
#### 3. TiO<sub>2</sub> Dispersion

**LX DTN 405**  
**LX DTN 555**  
**LX DTN 40 AB**  
**LX DT 605**  
**LX DT 60C**  
**LX DT 60CC**  
**LX DT 60AB**  
**LX DT 55W**

#### 4. TiO<sub>2</sub> Powder

LX-100TV  
Micro Bianco  
Micro Bianco N(\*NLL)  
LX Bianco 200  
LX Bianco 200N(\*NLL)  
LX TIS – 35  
LX TIS – 35ASM

# Comparison of UV protection effects

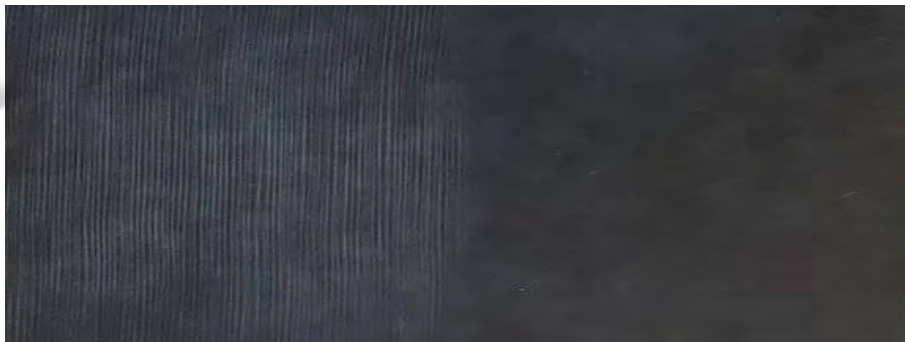
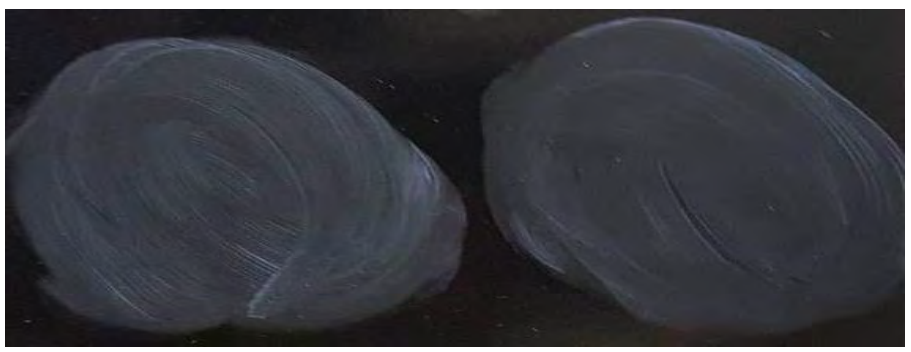
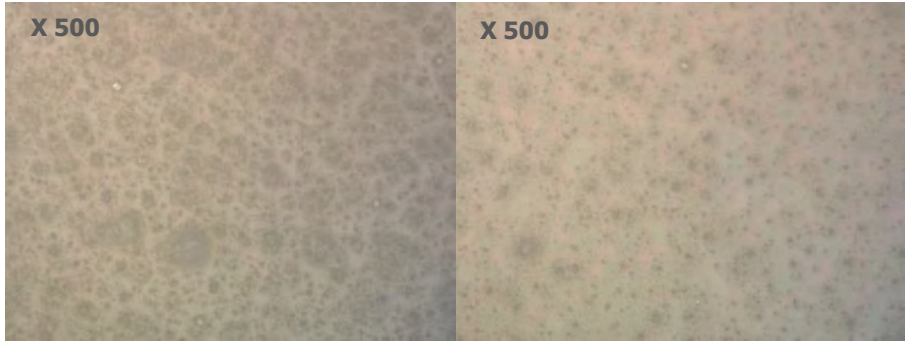


Data Source: Development of an autonomous water-responsive coating film and its application as an innovative sunscreen, IFSCC POSTER

# Detailed Comparison of Powder and Dispersion fluid

Use the dispersion fluid  
Use the powder

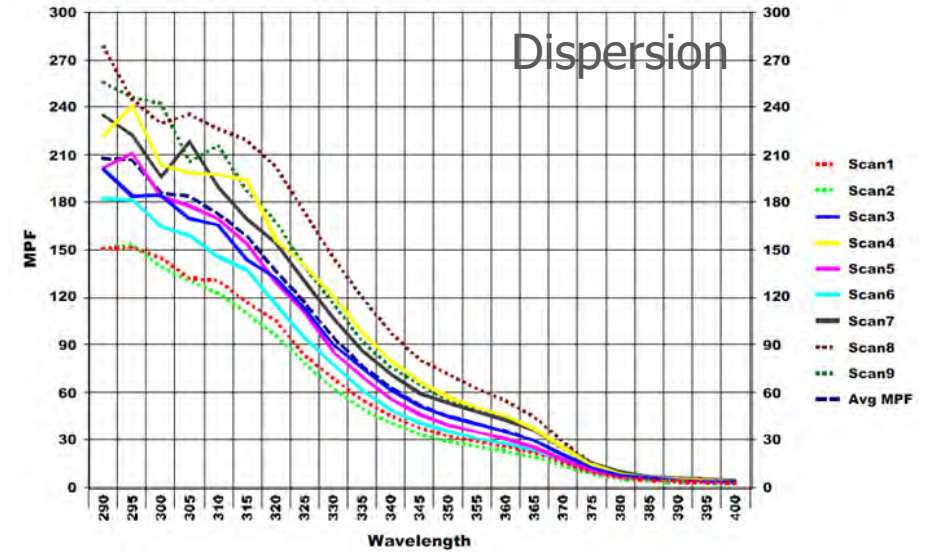
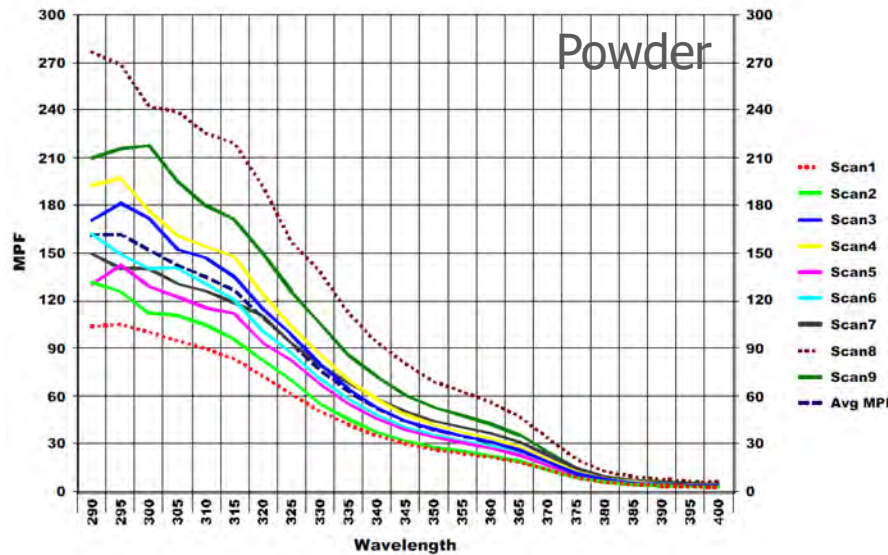
HTT1223SB-CA10 HTU0115SB-CA11



PHASE	Ingredient	INCI	HTT1223SB-CA10 %	HTU0115SB-CA11 %
A	DC 245	Cyclopentasiloxane	18.00	15.00
	SeraSense SF PTM	Phenyl trimethicone	600	6.00
	LX GEL A 20	Dimethicone, Dimethicone/Dimethicone Crosspolymer	5.00	5.00
B	Cetiol CC	Dicaprylyl Carbonate	5.00	5.00
	BENTON 38V CG	Disteardimonium Hectorite	0.300	0.30
	Microcare e9016	Cetyl PEG/PPG-10/1 Dimethicone	3.00	1.20
C	Plurol Diisostearique	Polyglyceryl-3 Diisostearate	0.50	0.50
	RHEODOLAO-15	Sorbitan Sesquioleate	0.50	0.50
D	LX HPA-150	Zinc Oxide, Triethoxycaprylylsilane	18.00	
	NT 95	Titanium Dioxide, Aluminum Hydroxide, Isostearic Acid	300	
	LX SS500	Silica	2.00	2.00
D'	LX DZT 60	Zinc Oxide, Titanium Dioxide, Aluminum Hydroxide, Isostearic Acid, Cyclopentasiloxane, Cetyl PEG/PPG-10/1 Dimethicone, Triethoxycaprylylsilane		20.00
	LX DZ705E	Zinc Oxide, Cyclopentasiloxane, Cetyl PEG/PPG-10/1 Dimethicone, Triethoxycaprylylsilane		10.00
	Water	Water	TO.100	TO.100
E	LX MOILUB 1000	Biosaccharide Gum-1	2.00	2.00
	MOILUB 701A	PEG/PPG-17/6 Copolymer	2.00	2.00
	Sodium Chloride	Sodium Chloride	1.20	1.20
	Disodium EDTA	Disodium EDTA	0.02	0.02
	Natureclean RP9	Raspberry Ketone/Propanediol	2.50	2.50

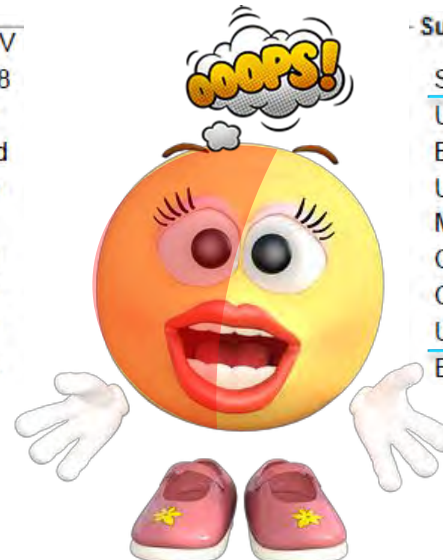


# Detailed Comparison of Powder and Dispersion fluid



## Summary Results

	Value	STDV
SPF:	80.96	17.38
UVA/UVB ratio:	0.622	0.02
Boots Star Rating (2004):	3	Good
UVA I/UV Ratio:	0.74	High
Max %T COV:	21.67	
Critical Wavelength:	378.1	0.51
Curve Area:	171.66	9.02
UVA PF:	37.17	7.37
Erythema UVA PF:	30.68	5.83



## Summary Results

	Value	STDV
SPF:	94.71	15.59
UVA/UVB ratio:	0.617	0.02
Boots Star Rating (2004):	3	Good
UVA I/UV Ratio:	0.74	High
Max %T COV:	20.7	
Critical Wavelength:	377.9	0.53
Curve Area:	178.97	7.72
UVA PF:	44.47	7.65
Erythema UVA PF:	33.49	5.76

SUNMILK Formulation ZnO 25% + TiO<sub>2</sub> 20%  
Powder Vs Dispersion Invitro(SPF-290) test

# LX-ZnO Powder

## LUXON SUN CARE products

### Zinc Oxide

#### 1. ZnO Dispersion

LX DZN(DZ) 40 AB  
LX DZN(DZ) 705  
LX DZN(DZ) 65C  
LX DZN(DZ) 65CC  
LX DZN(DZ) 65AB  
LX DZN(DZ) 65W

#### 2. ZnO Powder

**LX-HPA 30**  
**LX-HPA 30N (\* 30NL, 30NLL)**  
**LX-HPA 150**  
**LX-HPA 150N (\* 150NL, 150NLL)**  
**LX-SS 150**  
**LX-SS150N (\* SS150NLL )**  
**LX-SS 500**  
**LX-SS 500N (\*SS500NLL )**

### Titanium Dioxide

#### 3. TiO<sub>2</sub> Dispersion

LX DTN 405  
LX DTN 555  
LX DTN 40 AB  
LX DT 605  
LX DT 60C  
LX DT 60CC  
LX DT 60AB  
LX DT 55W

#### 4. TiO<sub>2</sub> Powder

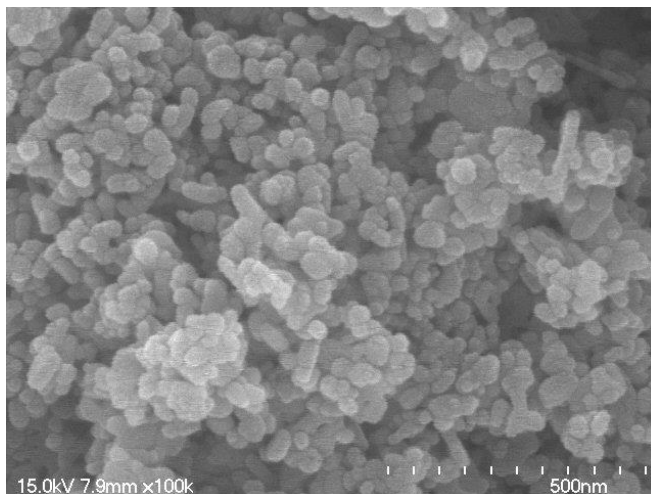
LX-100TV  
Micro Bianco  
Micro Bianco N(\*NLL)  
LX Bianco 200  
LX Bianco 200N(\*NLL)  
LX TIS – 35  
LX TIS – 35ASM

# LX-HPA 30, 30N, 150, 150N

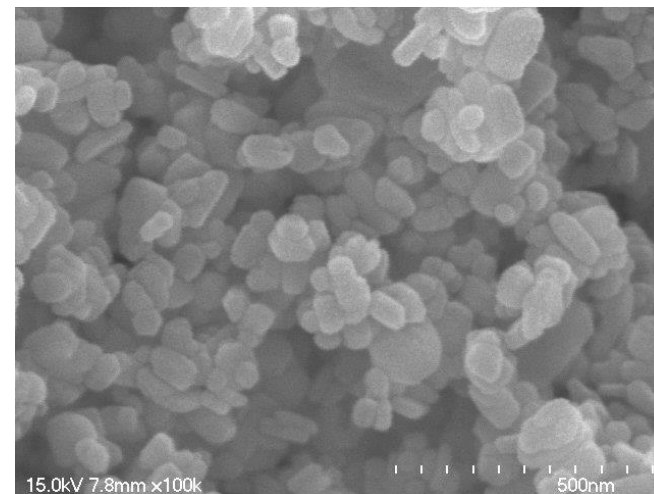


Grade	Descriptions	Our proposal	Avg. Particle size(nm)	Oil Absorption (ml/100g)
LX-HPA 30	Zinc oxide 30nm & Triethoxycaprylylsilane	SUN Cream, Tone-Up Cream, Whitening Agent, Etc.,	30~60	10~20
LX-HPA 30N	Zinc oxide 30nm & Silica & Stearic acid			
LX-HPA 150	Zinc oxide 150nm & Triethoxycaprylylsilane		100~200	10~20
LX-HPA 150N	Zinc oxide 150nm & Silica & Stearic acid			


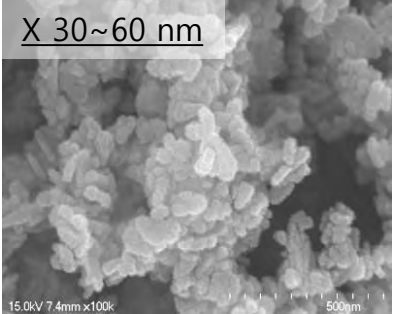
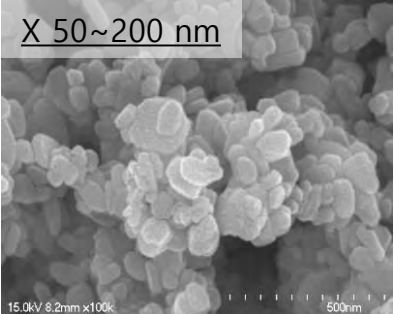
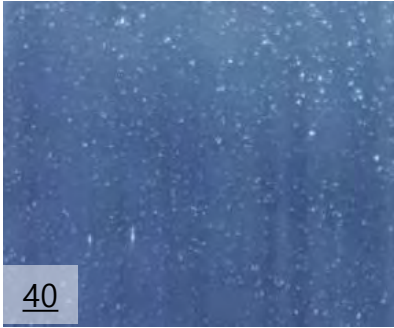
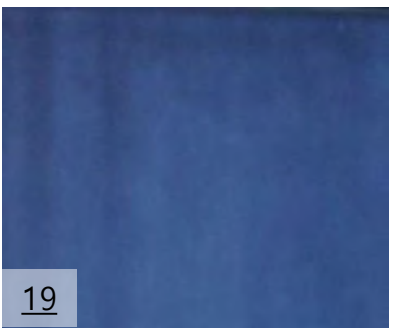

LX-HPA 30



LX-HPA 150



# LX-HPA 30, 30N, 150, 150N

	'B' Company	LX-HPA 30	LX-HPA150
SPF/PA	<b>67.02</b> / <b>66.6</b>	<b>70.87</b> / 60.02	68.21 / <b>67.01</b>
ZnO content	97.80	96.62	96.61
Loss on Ignition	1.85	3.02	2.56
Hydrophobicity	5	5	5
SEM ( X 100 K )			
Transparency ( W. I )			

# LX-SS 150, 150N, 500, 500N

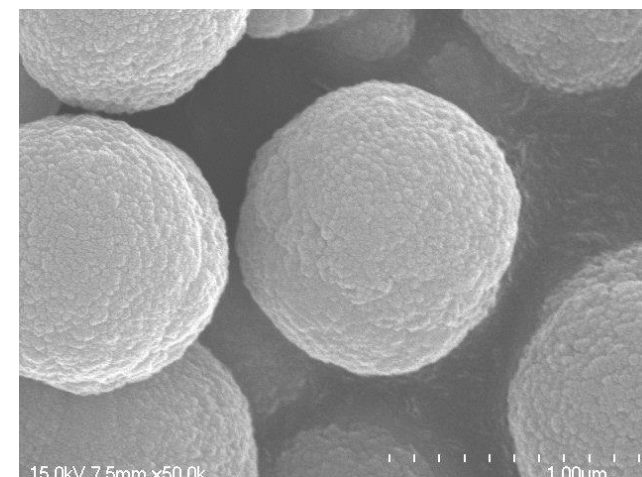


Grade	Descriptions	Our proposal	Avg. Particle size(nm)	Oil Absorption (ml/100g)
LX-SS 150	Zinc oxide 150nm & Silica & Triethoxycaprylylsilane		100~200	10~20
LX-SS 150N	Zinc oxide 150nm & Silica & Stearic acid	SUN Cream, Tone-Up Cream, Whitening Agent, Etc.,		
LX-SS 500	Zinc oxide 500nm & Silica & Triethoxycaprylylsilane		> 400	10~20
LX-SS 500N	Zinc oxide 500nm & Silica & Stearic acid			

LX-SS 150



LX-SS 500





# LX-TiO<sub>2</sub> Powder

## LUXON SUN CARE products

### Zinc Oxide

#### 1. ZnO Dispersion

LX DZN(DZ) 40 AB  
LX DZN(DZ) 705  
LX DZN(DZ) 65C  
LX DZN(DZ) 65CC  
LX DZN(DZ) 65AB  
LX DZN(DZ) 65W

#### 2. ZnO Powder

LX-HPA 30  
LX-HPA 30N (\* 30NL, 30NLL)  
LX-HPA 150  
LX-HPA 150N (\* 150NL, 150NLL)  
LX-SS 150  
LX-SS150N (\* SS150NLL )  
LX-SS 500  
LX-SS 500N (\*SS500NLL )

### Titanium Dioxide

#### 3. TiO<sub>2</sub> Dispersion

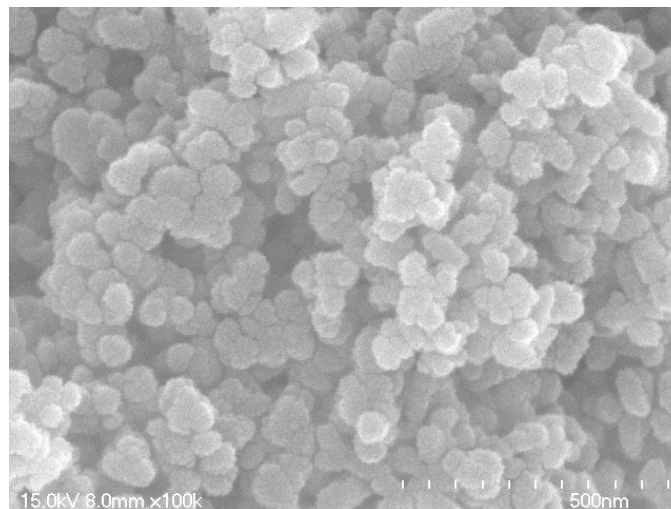
LX DTN 405  
LX DTN 555  
LX DTN 40 AB  
LX DT 605  
LX DT 60C  
LX DT 60CC  
LX DT 60AB  
LX DT 55W

#### 4. TiO<sub>2</sub> Powder

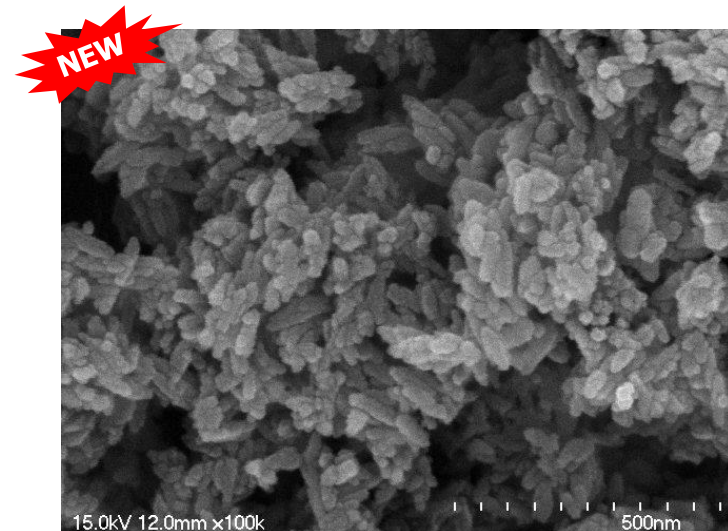
**Micro Bianco**  
**LX 95NT**  
**Micro Bianco N(\*NLL)**  
**LX Bianco 200**  
**LX Bianco 200N(\*NLL)**  
**LX TIS – 35**  
**LX TIS – 35ASM**

# Micro Bianco

Grade	Descriptions	Our proposal	Avg. Particle size(nm)	Oil Absorption (ml/100g)
Micro Bianco	Titanium Dioxide 30nm & Triethoxycaprylylsilane	Tone-Up Cream, SUN Cream, Whitening Agent, Etc.,	30~60	10~30
LX NT95	Titanium Dioxide 20nm & Stearic Acid	Tone-Up Cream, SUN Cream, Whitening Agent, Etc.,	20	10~30



**Micro Bianco**



**LX NT95**



## Micro Bianco Feature

EWG Green Level '2'

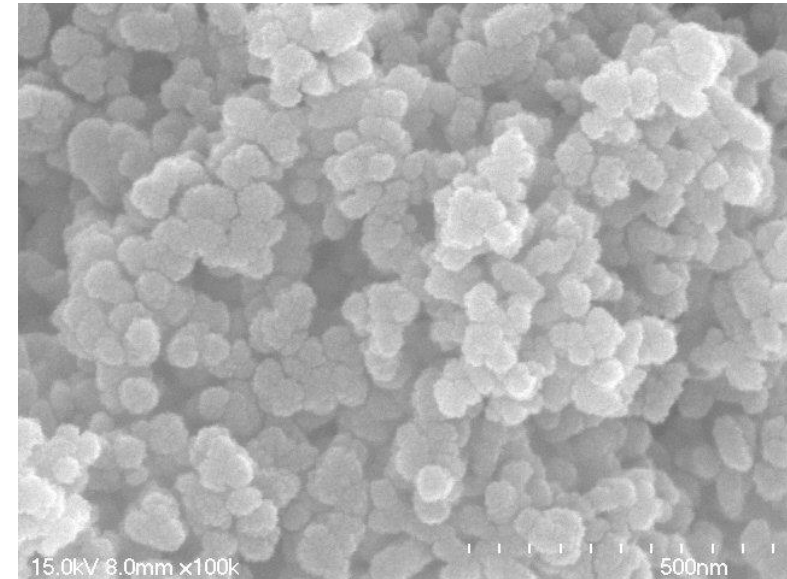
Best UVB PROTECTION

Whitening Effect

Perfect Longlasting

( TiO<sub>2</sub> 93% + Silica 4% + Aluminum 3% ) + AS 5%  
Particle Size: 30~60nm

## TiO<sub>2</sub> : Best UVB PROTECTION



# Feature of LX NT95

## LX NT95 Feature

EWG Green Level '2'

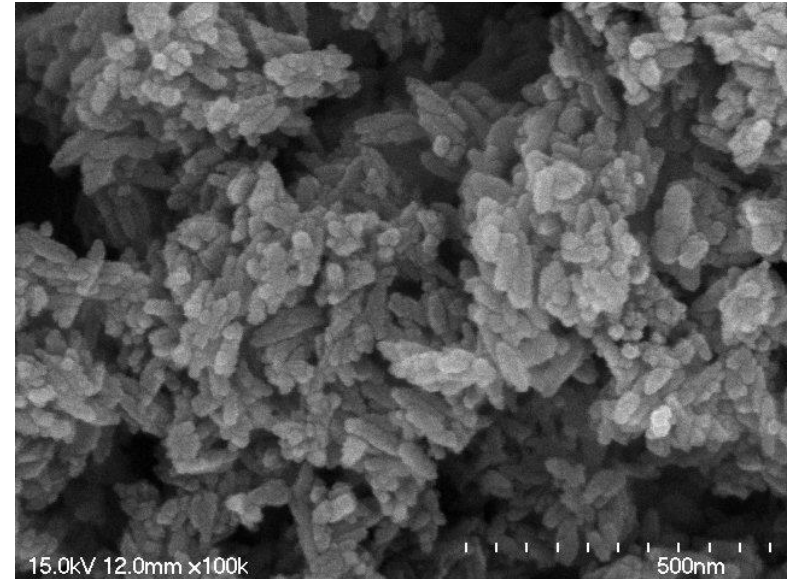
Best UVB PROTECTION

**Transparent Effect**, Smooth Feeling

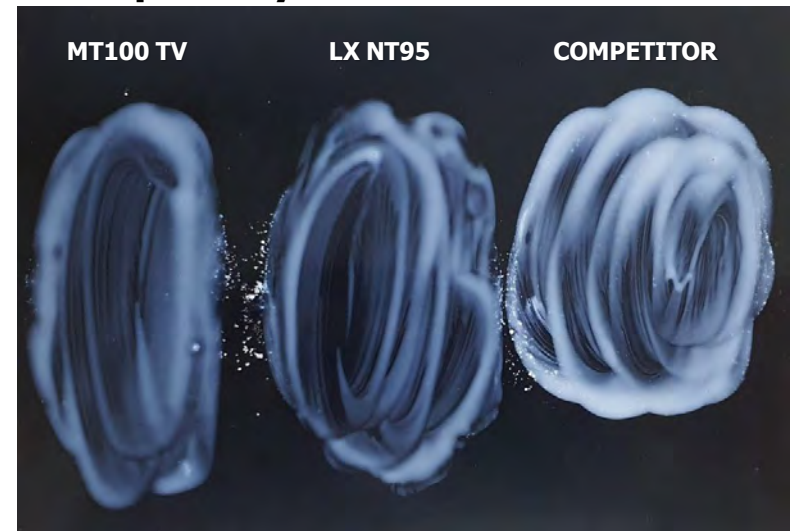
Perfect Longlasting

( TiO<sub>2</sub> 85% + Aluminum Hydroxide 10% ) +  
Stearic Acid 5%  
Particle Size: 20nm

## TiO<sub>2</sub> : Best UVB PROTECTION



## Transparency Test



# Oxygen Sun Cushion ( SPF30, PA++ )



## Feature

Moisturizing, Semimatt feeling

Lab No.: HTT1126SB-LA02

PHASE	Ingredient	INCI	%
A	Hicos IOP	Ethylhexyl palmitate	10.00
	Schercemol™ DIS ester	DIISOPROPYL SEBACATE	0.50
B	MIPEARL BGC	Butylene glycol dicaprylate/dicaprate	4.00
	BENTON 38V CG	Disteardimonium Hectorite	1.00
C	ISOLAN® GI 34	polyglyceryl-4 isostearate	2.00
	Arlacel-83	Sorbitan Sesquioleate	1.00
	Cetiol sensoft	Propylheptyl Caprylate	16.00
	<b>LX HPA-30</b>	<b>Zinc Oxide/Triethoxycaprylylsilane</b>	<b>16.00</b>
	<b>LX NT 95</b>	<b>Titanium Dioxide/Aluminum Hydroxide/stearic Acid</b>	<b>2.00</b>
D	<b>LX SS150</b>	<b>Zinc Oxide</b>	<b>2.00</b>
	<b>LX TIS-35</b>	<b>Sillica/Titanium Dioxide</b>	<b>0.50</b>
	Salacos HS-6C	Polyhydroxystearic Acid	0.50
	Lexgard GMCY	Glyceryl Caprylate	0.30
	Water	Water	TO.100
	<b>LX MOILUB 1000</b>	<b>Biosaccharide Gum-1</b>	<b>2.00</b>
E	<b>LX MOILUB 701A</b>	<b>PEG/PPG-17/6 Copolymer</b>	<b>0.50</b>
	MgSO4	Magnesium Sulfate Heptahydrate	0.80
	Disodium EDTA	Disodium EDTA	0.02
F	Natureclean RP9	Raspberry Ketone/Propanediol	2.50

## Standard Operating Procedures

1. Heat phase A to 85°C, then homomix at 4000rpm for 10 minutes.
2. After dispersing phase B at 85° C for 10 minutes, put it into phase A
3. After stirring phase C, add it into phase A.
4. Put phase D phase into phase A
5. After stirring phase E at 85°C, put it into phase A
6. Put F phase into A phase at 40°C



## Key Ingredients our products

**LX HPA-30**  
**LX NT95**  
**LX SS150**  
**LX TIS-35**

## Commend

**LX MOILUB 1000**  
**MOILUB 701A**

Reference : 식물나라/ Oxygen water sun cushin

# Our Proposal of Shaking SUN MILK W/S ( SPF50, PA++++ )



## Feature

Light feeling, No cludiness

Lab No.: HTT0716SB-MA01

PHASE	Ingredient	INCI	%
A	KF-96L-1.5cs	Dimethicone	8.00
	HRC-C6	Cyclohexasiloxane	5.00
	Cetiol CC	Dicaprylyl Carbonate	5.00
	SF1000N 6sc	Dimethicone	4.00
	Dowsil F2-3196	Caprylyl Methicone	3.00
	Microcare e9016	Cetyl PEG/PPG-10/1 Dimethicone	2.00
	LX GEL A 20	Dimethicone, Dimethicone/Dimethicone Crosspolymer	2.00
B	Uvinul MC80(BASF)	Ethylhexyl Methoxycinnamate	6.00
	Cetiol® AB	C12-15 ALKYL BENZOATE	4.00
	PALSOL 340(DSM)	Octocrylene	4.00
	Uvinul A Plus Granular(BASF)	Diethylamino Hydroxybenzoyl Hexyl Benzoate	4.00
C	Moicos N115	Methyl hydrogenated rosinate	1.00
D	Bentone gel GTCC-V	Caprylic/Capric Triglyceriden, Stearalkonium Hectorite, Propylene Carbonate	1.50
E	LX HPA-30HD	Zinc Oxide, Hydrogen Dimathicone	10.00
	SPHESTA ECO H10	Silica & Lauryl Alcohol& Cetyl Alcohol	5.00
	LX TALC 46R DSM	Talc, Dimethicone	4.00
	LX NT 95	Titanium Dioxide, Aluminum Hydroxide, Stearic Acid	2.00
	LX SS 150	Zinc Oxide	3.00
	LX PMSQ P50	Polymethylsilsesquioxane	2.00
F	Water	Water	TO 100
	MOILUB 1000	Biosaccharide Gum-1	5.00
	MOILUB 701A	PEG/PPG-17/6 Copolymer	2.00
	Magnesium Surfate	Magnesium Surfate	0.40
	Natureclean RP9	Raspberry Ketone/Propanediol	2.50
	Disodium EDTA	Disodium EDTA	0.02

## Standard Operating Procedures

1. Dispersed in B after heating A 80°C
2. Warmed up to 80 °C in C Dispersion preparation separately for D
3. E input after cooling to 50 °C
4. Finish after 35 °C cooling



## Key Ingredients our products

LX HPA-30HD  
 SPHESTA ECO H10  
 LX TALC 46R DSM  
 LX NT 95  
 LX SS 150  
 LX PMSQ P50

## Commend

LX MOILUB 1000  
 MOILUB 701A  
 LX GELA 20  
 Moicos N115

Reference : Anessa Perfect UV sunscreen aqua booster

# Safty Sun Cream ( SPF30 PA++ )



## Feature

Transparent, Freshness Sun Cream

Lab No: HTT0716SB-CA01

PHASE	Ingredient	INCI	%
A	SF0015Z CM56	Cyclopentasiloxane, Cyclohexasiloxane	30.00
	LX GEL A 20	Dimethicone/Dimethicone, Dimethicone Crosspolymer	3.00
B	Cetiol CC	Dicaprylyl Carbonate	5.00
	BENTON 38V CG	Disteardimonium Hectorite	1.00
C	Microcare e9016	Cetyl PEG/PPG-10/1 Dimethicone	3.00
	RHEODOL AO-15	Sorbitan Sesquioleate	1.00
D	LX NT 95	Titanium Dioxide/Aluminum Hydroxide/Stearic Acid	6.00
	LX HPA 30HD	Zinc Oxide/Hydrogen Dimathicone	10.00
E	Water	Water	TO.100
	LX MOILUB 1000	Biosaccharide Gum-1	2.00
	MOILUB 701A	PEG/PPG-17/6 Copolymer	2.00
F	MgSO4	Magnesium Sulfate Heptahydrate	1.20
	Disodium EDTA	Disodium EDTA	0.02
F	PRESERVATIVES	Phenoxyethanol / Ethylhexylglycerin / 1,2-Hexanediol	1.35

## Standard Operating Procedures

1. Heat phase A to 85°C, then homomix at 4000rpm for 10 minutes.
2. After dispersing phase B at 85° C for 10 minutes, put it into phase A
3. After stirring phase C, add it into phase A.
4. Put phase D phase into phase A
5. After stirring phase E at 85°C, put it into phase A
6. Put F phase into A phase at 40°C



## Key Ingredients our products

**LX NT 95**  
**LX HPA 30HD**

**Commend**  
**LX MOILUB 1000**  
**LX MOILUB 701A**  
**LX GEL A 20**

Reference : COSON / Safty 365 Sun Cream

# Base-Skip Tone-up Sun( SPF50 PA++++ )



## Feature

Base-Skip tone-up Sun Cream

UV protection excellent

Lab No.: HTU0805SB-CA14

PHASE	Ingredient	INCI	%
A	LX DZTN 605H	Please refer to LUXON MSDS	50.00
	DC 245	Cyclopentasiloxane	9.00
	Cetiol® Sensoft	Propylheptyl Caprylate	2.50
	Dowsil F2-3196	Caprylyl Methicone	2.50
	Bentone 38 vc g	Disteardimonium Hectorite	0.80
	Moicos N115	Methyl hydrogenated rosinatate	0.50
	LX GEL A 20	Dimethicone, Dimethicone/Dimethicone Crosspolymer	0.30
B	DACHEA EZH IOY 50	Please refer to LUXON MSDS	q.a
	DACHEA EZH IOR 50	Please refer to LUXON MSDS	q.a
C	D.I.WATER	Water	TO.100
	LX MOILUB 1000	Biosaccharide Gum-1	1.00
	LX MOILUB 701A	PEG/PPG-17/6 Copolymer	2.00
	Sodium chloride	Sodium chloride	1.20
	Hyaluronate	sodium hyaluronate	q.a
	Allantoin	Allantoin	q.a
	Disodium EDTA	Disodium EDTA	q.a
D	Natureclean RP9	Raspberry Ketone/Propanediol	2.50

## Standard Operating Procedures

1. Heat phase A to 80°C.
2. Heat phase B to 80°C., then Homomix at 3000rpm for 5minutes. And add to phase A.
3. Add phase C to phase A+B
4. After Cooling to 60 °C in D phase, put into A phase; Homomix at 3000rpm for 15 minutes.
5. Cooling & Defoaming.



## Key Ingredients our products

LX DZTN 605H

### Commend

LX MOILUB 1000

LX MOILUB 701A

LX GEL A 20

Moicos N115

Reference :

Kolmar / Porcelain Base-skip Tone Up Beige



# Thank you

**Korea Factory/R&D** : 58, Surihol-ro 934beon-gil, Beobwon-eup, Paju-si, Gyeonggi-do,  
Republic of Korea  
[Tel:+82-31-943-7751](tel:+82-31-943-7751) Fax:+82-31-943-7752

**China HuZhou Factory** : No.328 Guangyuan Road,Wuxing District,Huzhou City, ZheJiang  
Province, China [Tel:+86-572-2607665](tel:+86-572-2607665) Fax:+86-572-2607-675

**Shanghai Branch** : Rm 2116,Block A,East International Building,No.85 Loushanguan Rd,  
Changning District,Shanghai City,China [Tel:+86-21-6278-2288~216](tel:+86-21-6278-2288~216)  
Fax:+86-21-6278-3723

**Website** : <http://www.luxonkorea.co.kr>