

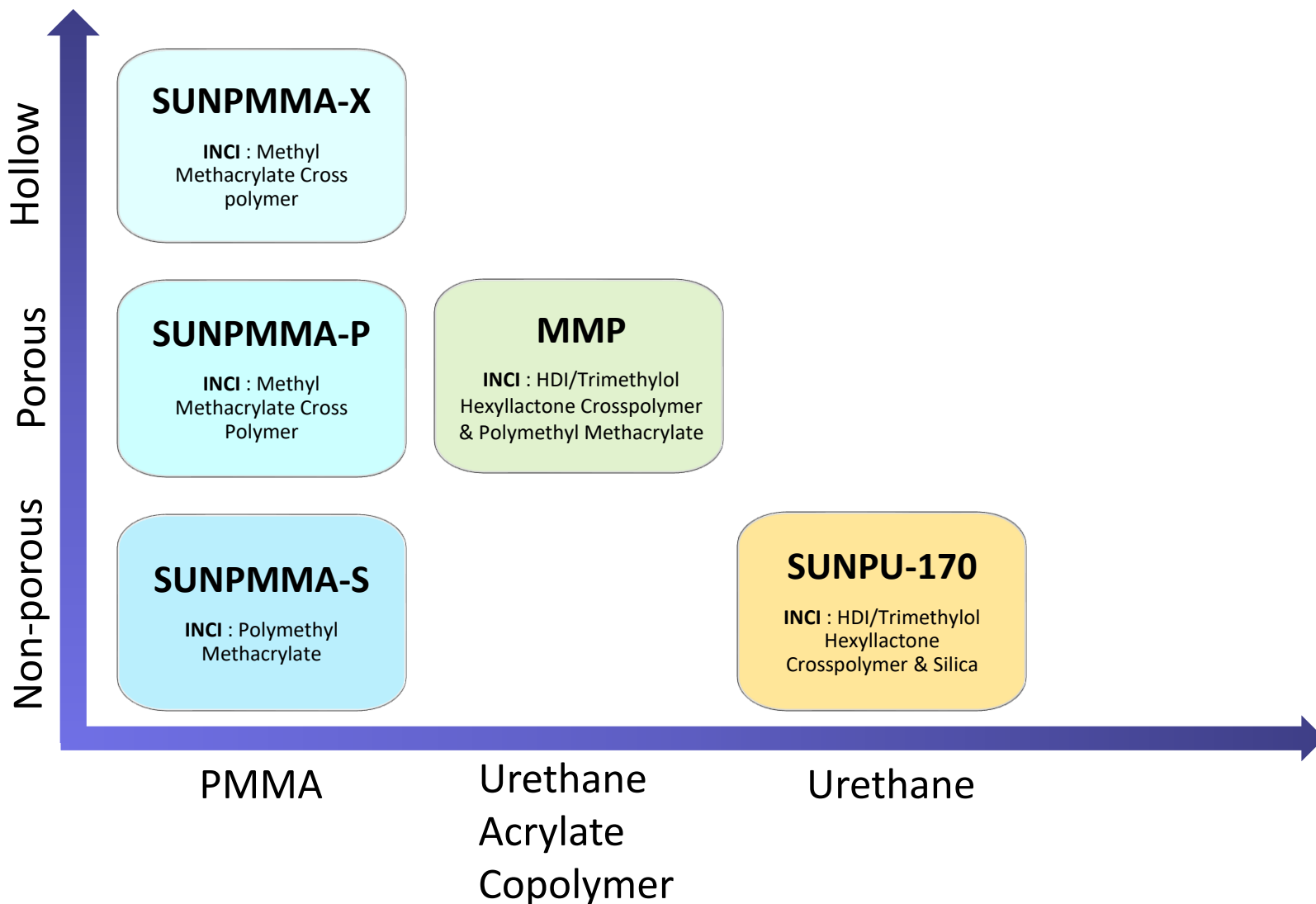
Polymer Bead

SUNJIN BEAUTY SCIENCE

JUN. 2025

Ver 1.0

Polymer Bead Overview



Polymer Bead

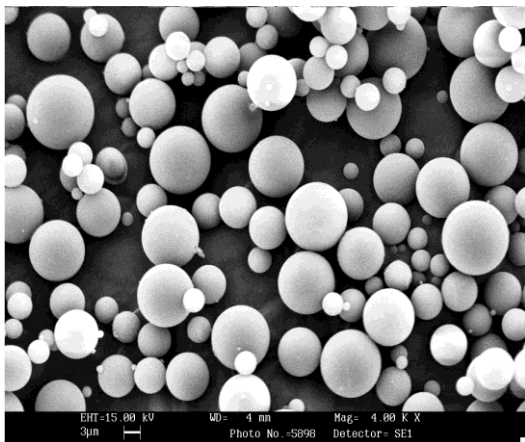
Product	INCI Name	Particle Size	Shape	Color	Oil Absorption
Spherical PMMA		(μm)			
SUNPMMA-S	Polymethyl Methacrylate	7	Spherical	White	0.45
Porous PMMA					
SUNPMMA-COCO130	Methyl Methacrylate Cross Polymer	8	Spherical	White	1.2-1.4
SUNPMMA-COCO170	Methyl Methacrylate Cross Polymer	8	Spherical	White	1.6-1.8
SUNPMMA-P	Methyl Methacrylate Cross Polymer	8	Spherical	White	1.7-2.1
SUNPMMA-PH	Methyl Methacrylate Cross Polymer	8	Spherical	White	2.1-2.4
Hemi Spherical PMMA					
SUNPMMA-X	Methyl Methacrylate Cross polymer	9	Spherical	White	2.9-3.3
Urethane Bead		(μm)			
SUNPU-170	HDI/Trimethylol Hexyllactone Crosspolymer & Silica	14-20	Spherical	White	
Urethane Hybrid					
MMP	HDI/Trimethylol Hexyllactone Crosspolymer & Polymethyl Methacrylate	7	Spherical	White	1.8-2.3

PMMA Bead

Polymer Micro Beads
with great
compatibility with
various Thickeners



SUNPMMA-S series



Chemical Name

:Polymethyl Methacrylate

INCI Name

:Polymethyl Methacrylate

CAS No.

:9011-14-7

SUNPMMA-S

PMMA 100%

Particle Size

7 µm

Oil Absorption

0.45 cc/g

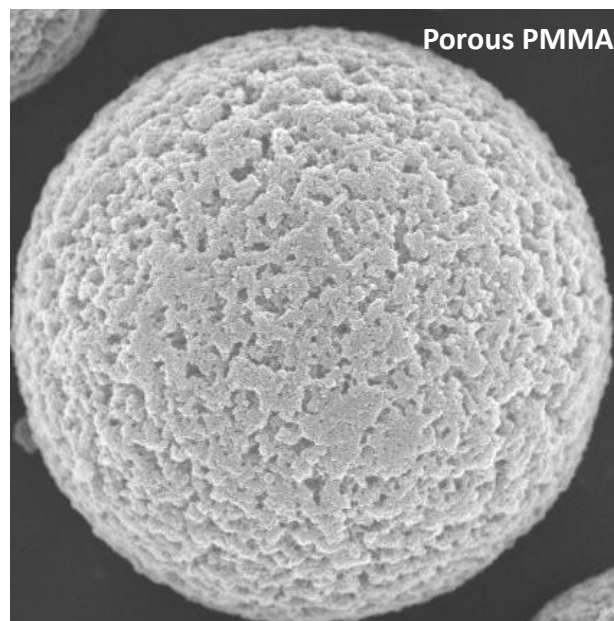
Porous PMMA Bead

Fast Absorption
& Selective Sebum
Absorption



Porous PMMA Beads

Grade	INCI	Avg. Particle size(μm)	Oil Absorption (cc/g)
SUNPMMA-COCO130	Methyl Methacrylate Cross Polymer	8	1.2~1.4
SUNPMMA-COCO170	Methyl Methacrylate Cross Polymer	8	1.6~1.8
SUNPMMA-P	Methyl Methacrylate Cross Polymer	8	1.7~2.1
SUNPMMA-PH	Methyl Methacrylate Cross Polymer	8	2.1~2.4



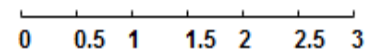
SUNPMMA PH 2.4

SUNPMMA P 1.89

COCO170 1.72

COCO130 1.34

SUNPMMA-S 0.45



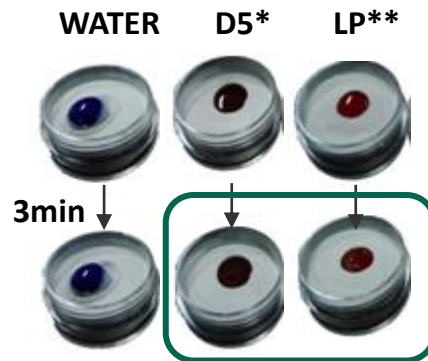
Selective Oil Absorption

Porous PMMA,
especially good for

- Sebum control skin care
- **Men's skin care**

For its excellent feel
and spread **without
skin dryness**

Porous PMMA



Porous PMMA absorbs
oils fast but not water

Porous Silica



Porous Silica absorbs oils
& water fast

→ Skin feels dry

**Selective Sebum
Absorption for
Skin Care**

*D5: Cyclomethicone

**LP: Liquid Paraffin

Selective Sebum Absorption

4% powder in lotion



Squalene applied skin



Aluminum
Starch

Corn Starch

Rice Starch

SUNSIL-130



SUNSIL-
OLEO130



SUNPMMA-P

SUNPMMA-S

Lotion Base



SUNPMMA-X: Hemi-Spherical PMMA Beads

Pore minimizer
For Skin Care



SUNPMMA-X Hemi-spherical

Particle size:

9 μ m

Oil absorption:

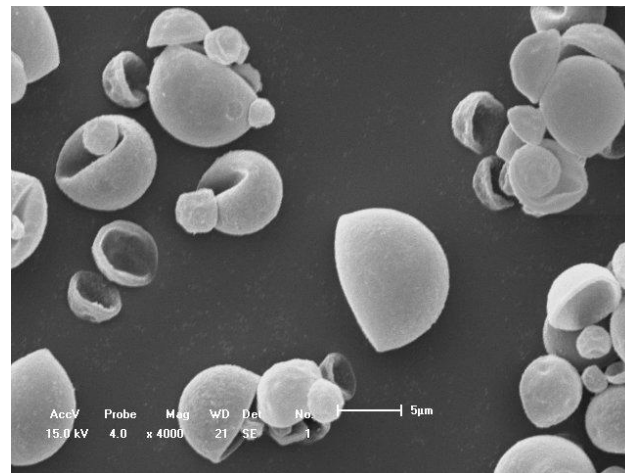
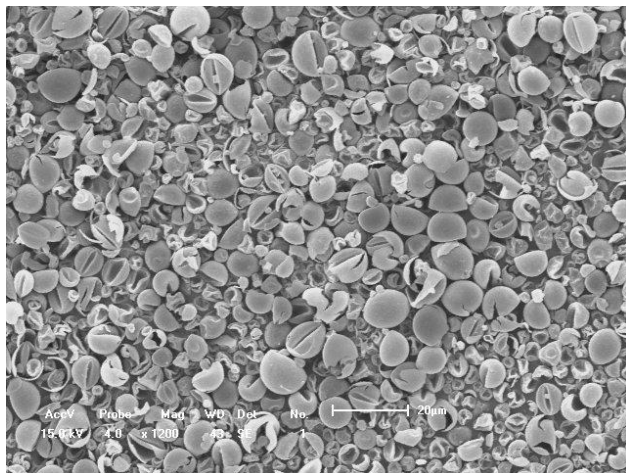
2.9~3.3cc/g

INCI:

Methyl Methacrylate
Crosspolymer

Benefits:

Cushion Feel
Rolling & Skin Adhesion
Great Pay Off
Excellent Spreadability



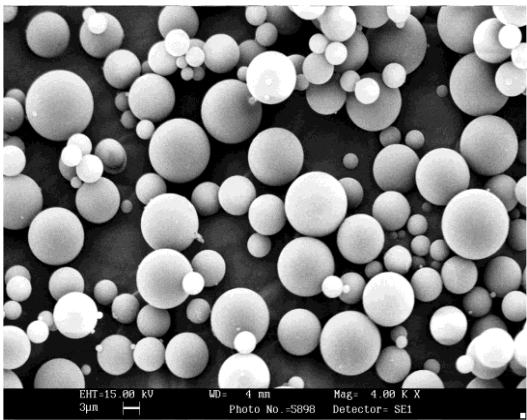
Pore minimizer Studio test

SUNPMMA-X



Particle size: 9um
Oil Absorption: 2.9~3.3cc/g

SUNPMMA-S



Particle size: 7um
Oil Absorption: 0.45cc/g

2015_PoreminimizerPrimer

Trade Name	%
GCM-5	60.5
PS-2000	5
200 Fluid, 0.65cs	10
200 Fluid, 2cs	15
SUNPMMA-X or SUNPMMA-S	7.5
PMSQ	2

Opaque



Translucent



Test Results



SUNPMMA-X applied



SUNPMMA-S applied



Why Hemi-spherical?

1. Cushion Feel



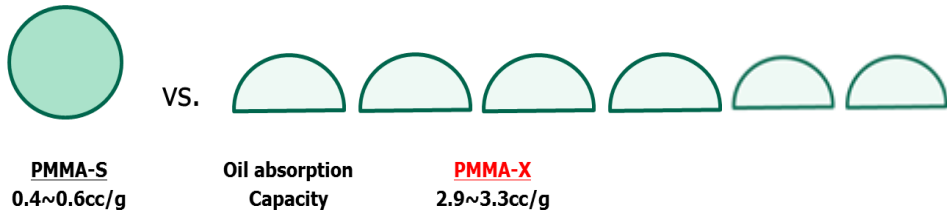
2. Rolling & Adhesion



3. Double Pay off by hemi-spherical shape



4. 6X Pay off by Bulky nature of PMMA-X

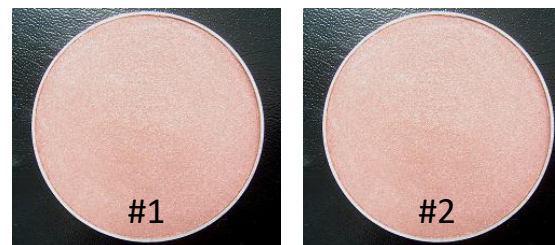


5. Better Compressibility due to hemi-spherical shape



Pressed Powder with 5% of **SUNPMMA-X**

	PRODUCT NAME	#1	#2
A	SUNPMMA-X	0	5.0
	SUNPMMA-S	5.0	0
	SUNTALC-AS	40.0	40.0
	SUNSERI-AS	22.6	22.6
	SUNMICA-AS	10.0	10.0
	SUNTITAN-AS	7.0	7.0
	Aluminum Stearate	3.0	3.0
	SUNIOR-AS	0.3	0.3
	SUNIOB-AS	0.1	0.1
	SUNIOY-AS	1.0	1.0
B	DC-200F-100cs	9.0	9.0
	DC-200F-10cs	2.0	2.0
	total	100%	100%



Big Difference!

Why Hemi-spherical?

1. Cushion Feel



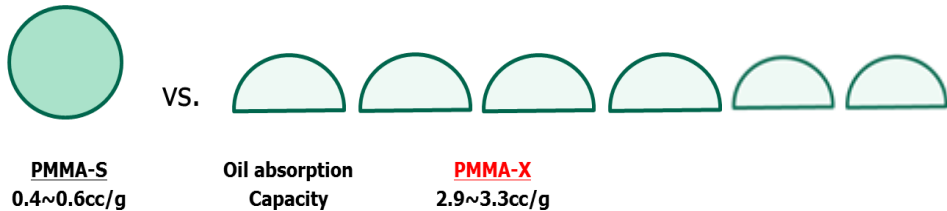
2. Rolling & Adhesion



3. Double Pay off by hemi-spherical shape



4. 6X Pay off by Bulky nature of PMMA-X



5. Better Compressibility due to hemi-spherical shape



SUNPU-170: Urethane Bead

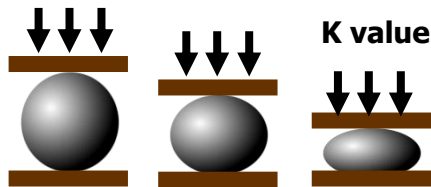
Instant Elasticity

The most elastic polymer bead
from SUNJIN



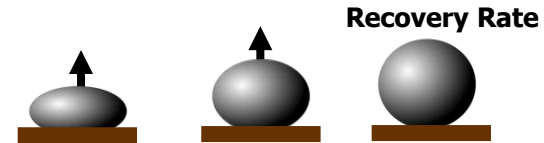
How to measure **SOFTNESS** and **ELASTICITY** of Micro Beads?

K value for Softness



*The lower K value,
the softer*

Recovery Rate for Elasticity



*The higher recovery rate value,
the more elastic*

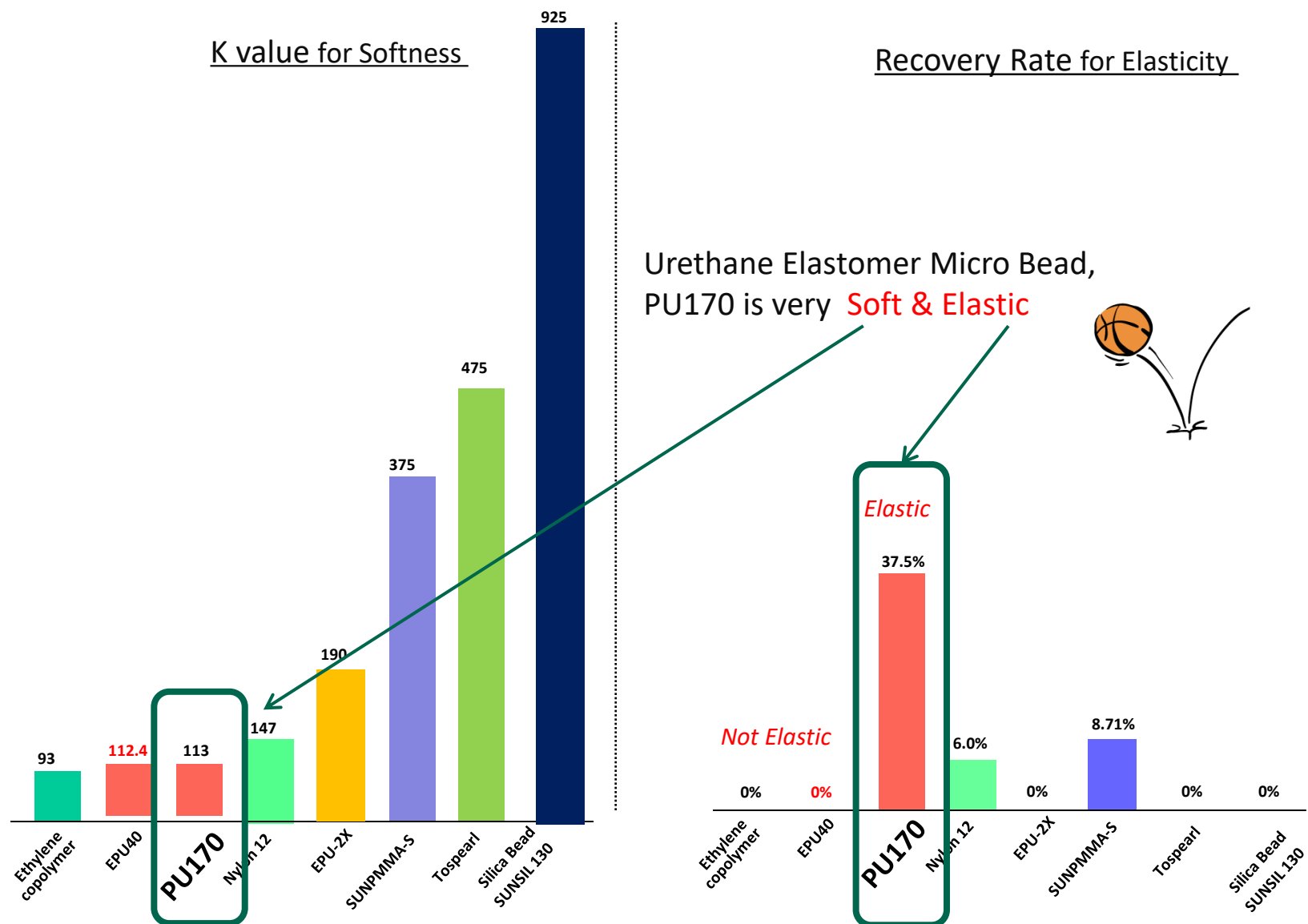


*One particle of each powder type was
exposed to compression.
Pressure necessary for 10% deformation of
the particle was measured.*

(Measuring Tool:

*Shimadzu **Micro Compression
Testing Machine** MCTM-500)*

K value & Recovery Rate



SUNPU 170 : Urethane Bead

Particle size:

17um

Grade	Descriptions	Avg. Particle size(μm)	Hardness
SUNPU-170	Urethane Bead	14~20	Soft

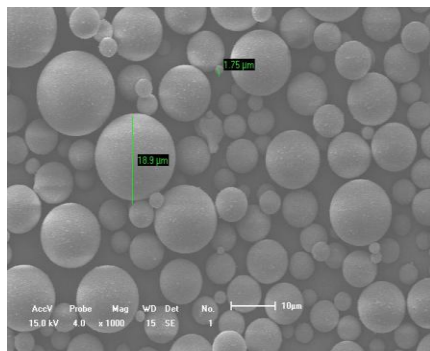
INCI:

HDI/Trimethylol Hexyllactone

Crosspolymer & Silica

Urethane bead for Premium skin care

Urethane Bead is an excellent choice for **skin care** application due to its unique optical blurring effect and **elegant texture**



Best recommend for **SKIN CARE**

(1) Anti Wrinkle Cream

- ...Instantly see up to a 29% reduction in fine, dry lines. Skin is luminous.

(2) Eye Care Cream

- "...The density, **elasticity** and firmness of your skin are preserved...Fine lines are smoothed out..."

(3) Moisturizing Lotion

- ELASTICITY gives moisturizing feel
- "Skin is left feeling velvety smooth..."

(4) Night Cream

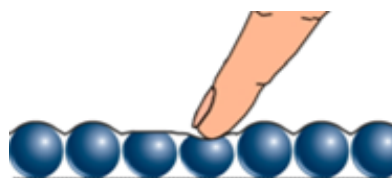
- An intensive action cream, developed to meet the special needs of the skin at night, The density, elasticity and firmness of your skin are preserved...Fine lines are smoothed out



Urethane Bead for Skin Care

2016 W/S Wrinkle Reduction Cream ver1.0

Phase	Trade Name	INCI Name	%
A	KF-995	Cyclomethicone	14.5
	Gransil ORB-2	Dimethicone & Cyclopentasiloxane & Polysilicone-11 & Nylon-12 & Silica & PEG-10 Dimethicone & Polysorbate 40 & Isohexadecane & Ammonium Polyacryloyldimethyl Taurate	44.6
	KF-6017	PEG-10 Dimethicone	0.9
B	D.I water	Water	18
	1.3 B.G	1,3-butylene glycol	4.6
C	Marsh Mallow Powder	HDI/Trimethylol Hexyllactone Crosspolymer & Polymethyl Methacrylate	3
	SUNSIL-20	Silica	1
	JH-BLUE	Titianium dioxide & Mica & Polymethyl methacrylate	0.4
	SUNPU-170	HDI/Trimethylol Hexyllactone Crosspolymer & Silica	13



**Elegant & Elastic
Luxurious Texture**



Marsh Mallow Powder

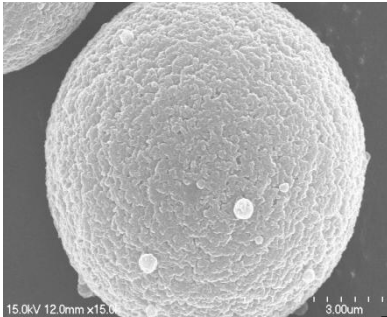
New in 2014

Soft
Elastic
Porous
Like Marsh Mallow



3 in 1 : Marsh Mallow Powder

Marsh Mallow Powder



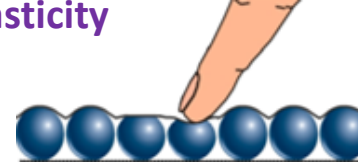
Urethane Acrylate

Elastic

Porous

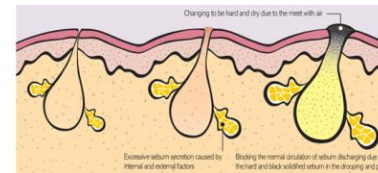
Soft

Instant Elasticity



Selective Sebum Control

only absorbs oil not moisture



Fast Absorption Effect

Porous Polymer Bead makes cosmetic layer disappear quickly during application

INCI Name: HDI/Trimethylol
Hexyllactone Crosspolymer &
Polymethyl Methacrylate

Marsh Mallow Powder @ UL Knowledge center

Encourage Skin Care with Sunscreen Sensorial Modifiers

Posted on July 20, 2018 by [Lucas Portilho](#) — 5 comments



Most sunscreens leave an extremely oily sensorial effect on the skin, which does not encourage people to apply as much, or as often as they should. According to the Skin Cancer Foundation¹, an ... [\[Read More...\]](#)

<https://knowledge.ulprospector.com/8507/pcc-sunscreen-sensorial-modifiers/>

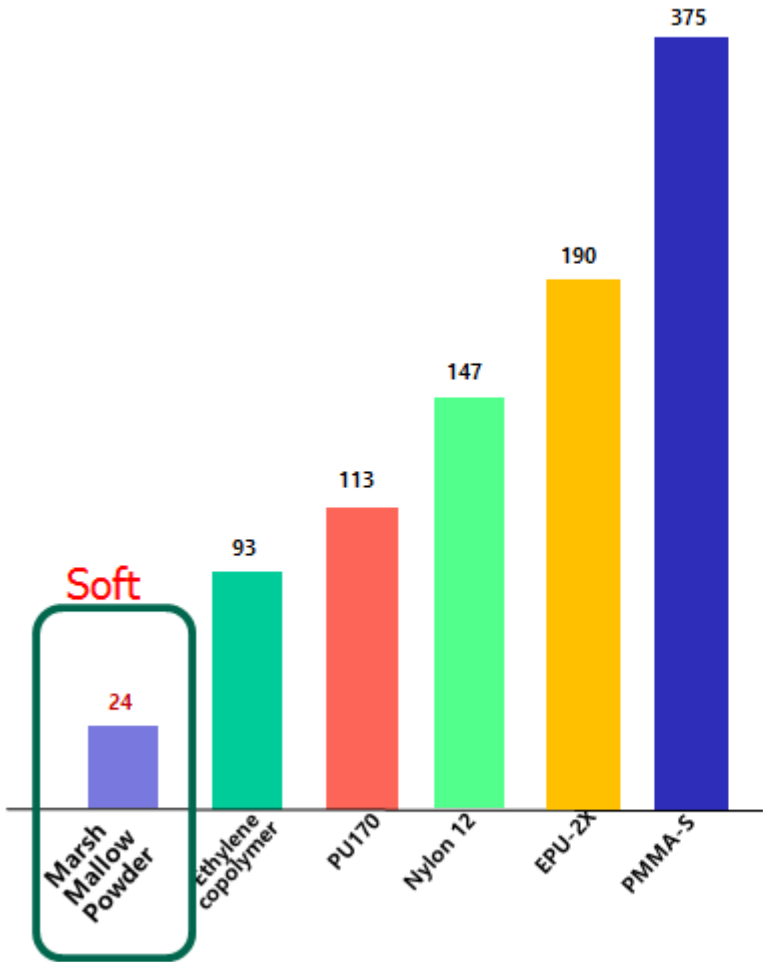
PROSPECTOR®

About Lucas Portilho

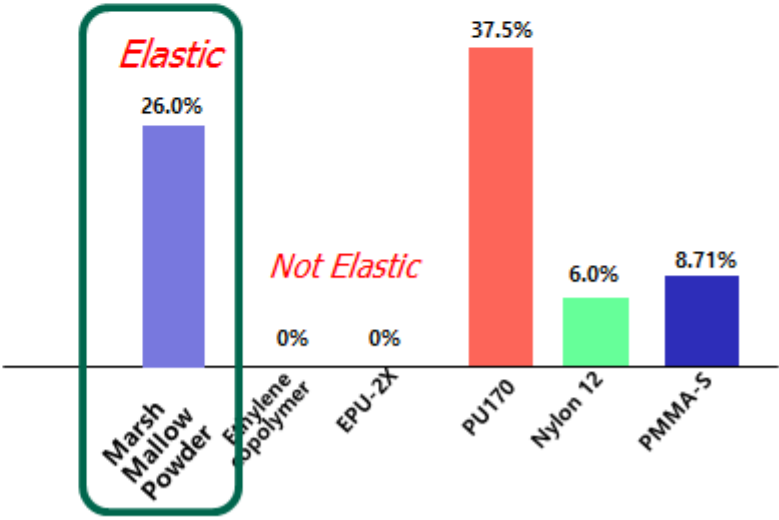
Lucas Portilho is a cosmetology expert with [IPUPO](#), the union of high-level professionals who currently work in the cosmetic markets throughout Brazil. Their main objective to bring and share knowledge to enable health professionals through updated teaching methods at the highest level.

Marsh Mallow Powder

K value for Softness

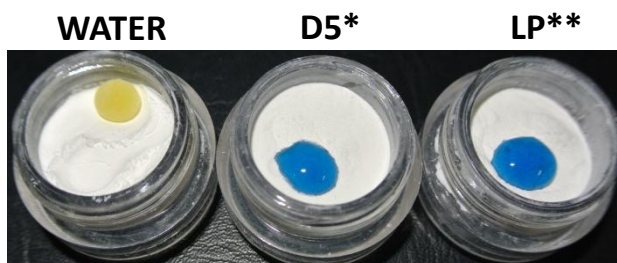


Recovery Rate for Elasticity



Selective Sebum Absorption

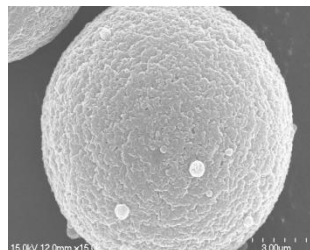
Marsh Mallow Powder



3min



Marsh Mallow selectively
absorbs oils over water



Porous Silica



3min



Porous Silica absorbs oils
& water fast

→ Skin feels dry

**Selective Sebum
Absorption**

*D5:Cyclomethicone

**LP: Liquid Paraffin

Spreadability of MMP



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