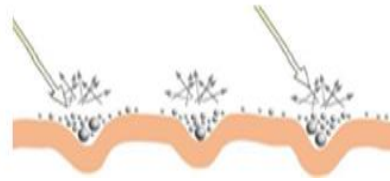


Sensory Powder in Skin Care, Why?

1. Soft Focus effect

- **Optical blurring wrinkles**
- *“Light diffusers help hide imperfections”, “Visibly diminish”, “Daily wrinkle reducing cream”*
- *“Visibly reduces fine lines”*



2. Improve Spread

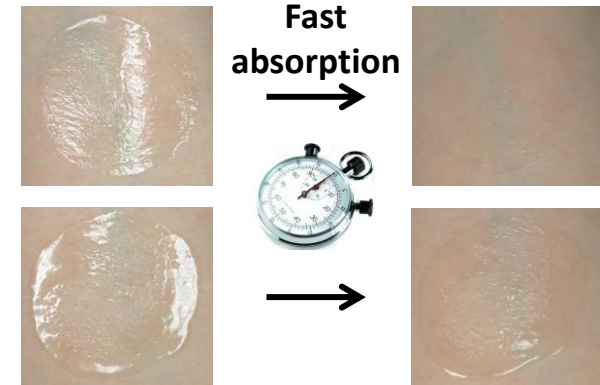
- **Spherical** micro beads improve rolling of cosmetic layer
- *“Ultra comfort textures”*

3. Reduce oiliness

- **Porous** micro beads absorbs oily components and reduce tackiness
- *“oil and shine disappear for fresh, pure, matte skin”*
“long lasting matte appearance”, “Anti Shine”

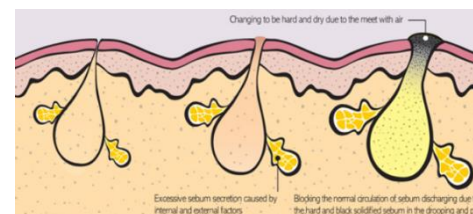
4. Fast Absorption

- **Porous lipophilic** micro beads enhance evaporation of cosmetic layer and makes visual fast absorption effect



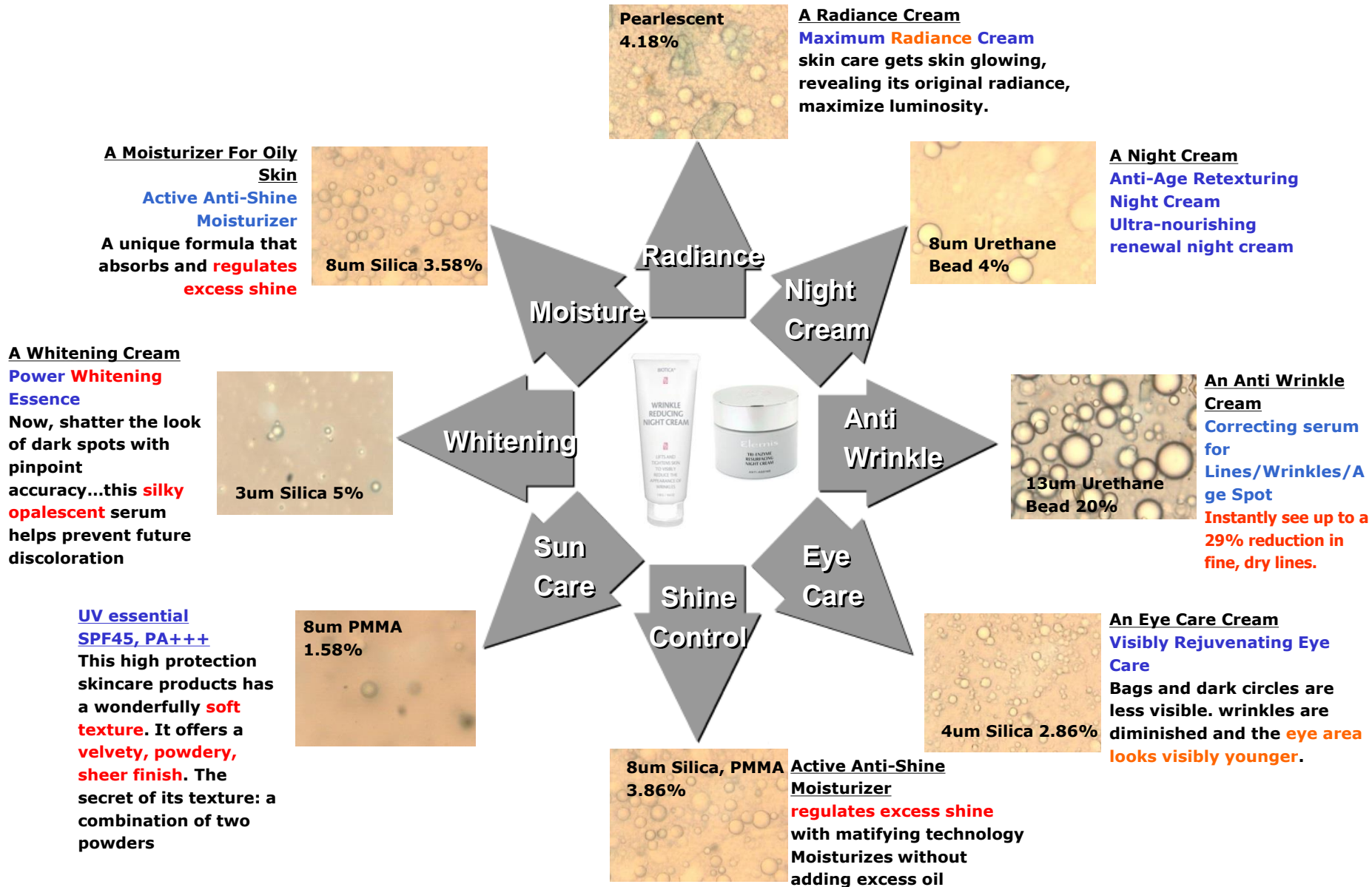
5. Selective Sebum Absorption

- **Porous lipophilic** micro beads enhance selectively absorbs oily components of cosmetic layer



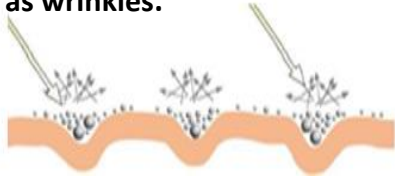
Absorbing not moisture
but sebum on skin
Selectively

Skin Cares with Sensory Powder inside



Soft Focus

- Soft focus micro beads possess the ability to **blur** skin troubles such as wrinkles.



- Wrinkles on the skin are perceptible though the contrast of light and dark that accentuates even very subtle creases.
- Instead of covering the trouble area by highly opaque materials such as TiO_2 , **soft focus powder diffuses optical light** within the structures.
- Soft focus powder does not produce whiteness, **but rather natural translucent finish**

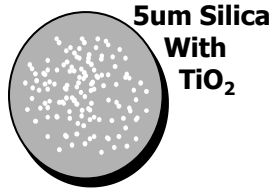


Marketing Claims of Soft Focus in Skin Care

- "...wrinkles are diminished..."
- "...the eye area looks visibly younger..."
- "...fine lines are reduced and the eye contour looks visibly younger..."
- "...Light diffusers help hide imperfections..."
- "...immediately and visibly smoothed..."
- "...this daily moisturizing lotion visibly reduces fine lines"
- "...visibly corrects the first signs of aging"
- "...Instantly see up to a 29% reduction in fine, dry lines."
- "...The look of lines and wrinkles is significantly reduced..."

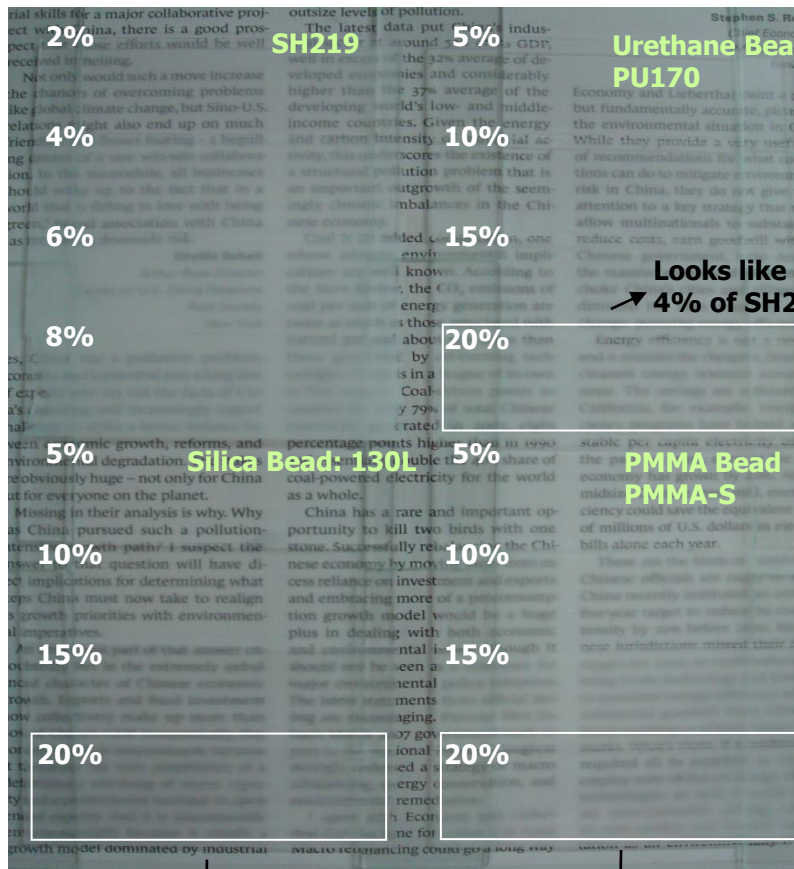
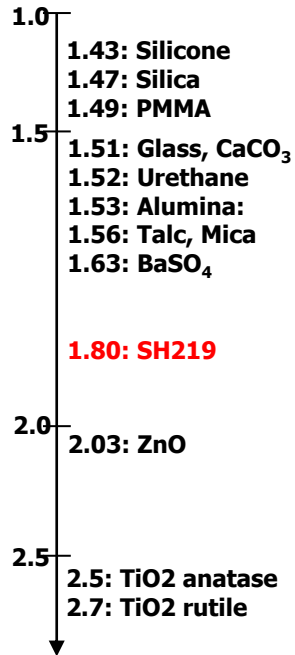


SH219, Soft Focus Agent



Grade	Composition	Refractive Index
SH219	Silica 75% TiO2 25%	1.8
SH219-AS	Silica 69% TiO2 27% AS 4%	1.8

Refractive Index Of cosmetic powders



Looks like 3% of SH219

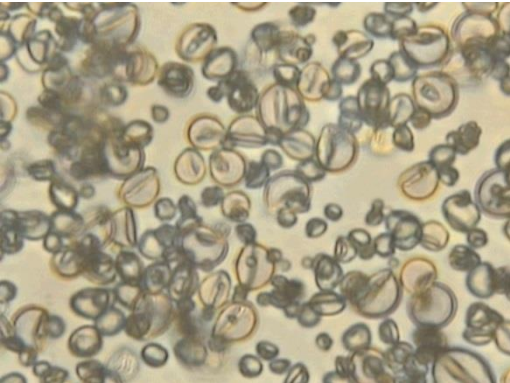
Looks like 5% of SH219

SH219: Most efficient soft focusing material

SH219 approved by ECOCERT, Natural Origin Soft Focusing Agent

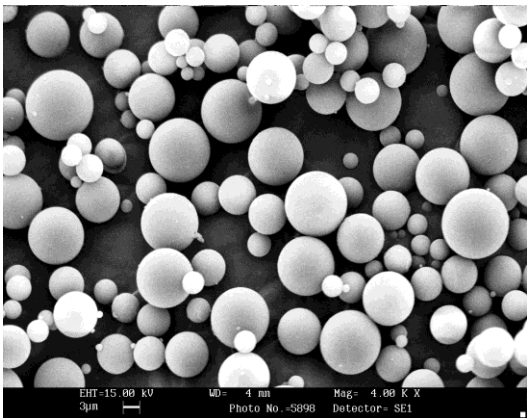
Pore minimizer: Hemi Spherical PMMA Bead

SUNPMMA-X



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

SUNPMMA-S



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

2015_Pore minimizer Primer

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



Pore Minimizer



SUNPMMA-X applied



SUNPMMA-S applied



Fast Absorption



Fast Absorption : SUNSIL-OLEO 20

<https://youtu.be/XMffiJ82YUY>



YouTube 분석 동영상 관리자

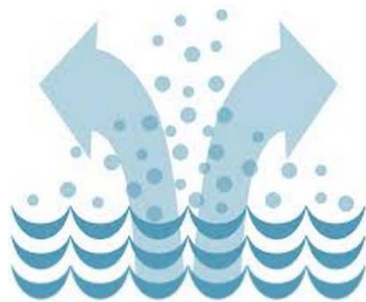
Fast Absorption in Skin Care

Fast absorption is one of important desirable features of skin care which instantly absorbs into skin and leaves behind only the comfort of perfectly soft, supple, smoothness.

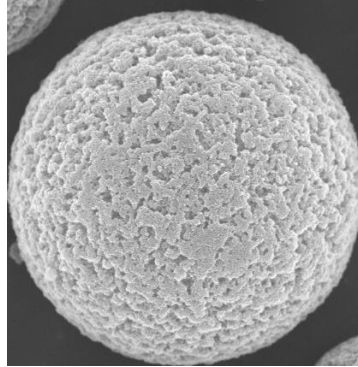
O/W Essence with Porous PMMA 4% P-20		→	15sec 	Porous PMMA beads greatly accelerate evaporation of volatile component of formula due to its large specific surface area with hydrophobicity(i.e. accelerate evaporation of moisture of formula)	
O/W Essence with Porous Silica 4% SUNSIL 130H		→		60sec 	
O/W Essence Base NO micro bead I nside		→			90sec

Fast Absorption

Porous micro beads improves consumers' perceptions about fast absorption by accelerating evaporation of volatile ingredients of skin care



Porous PMMA: SUNPMMA-P20



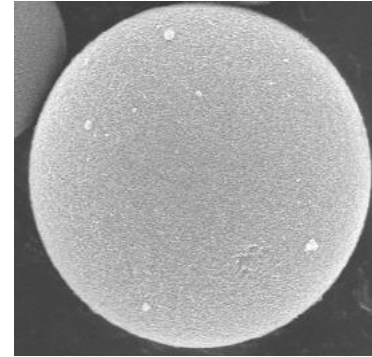
**Particle Size: 2um
Oil absorption:
2.0cc/g**

**Bigger pore sized
Hydrophobic Surface**

**Much Faster
Evaporation for volatile
hydrophilic ingredients
(i.e. moisture, alcohols)**

**Optically perceived
Faster Absorption than
silica beads**

Porous Silica: SUNSIL 130H

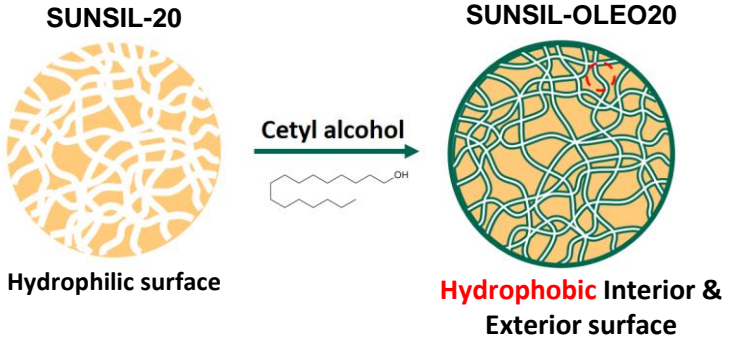
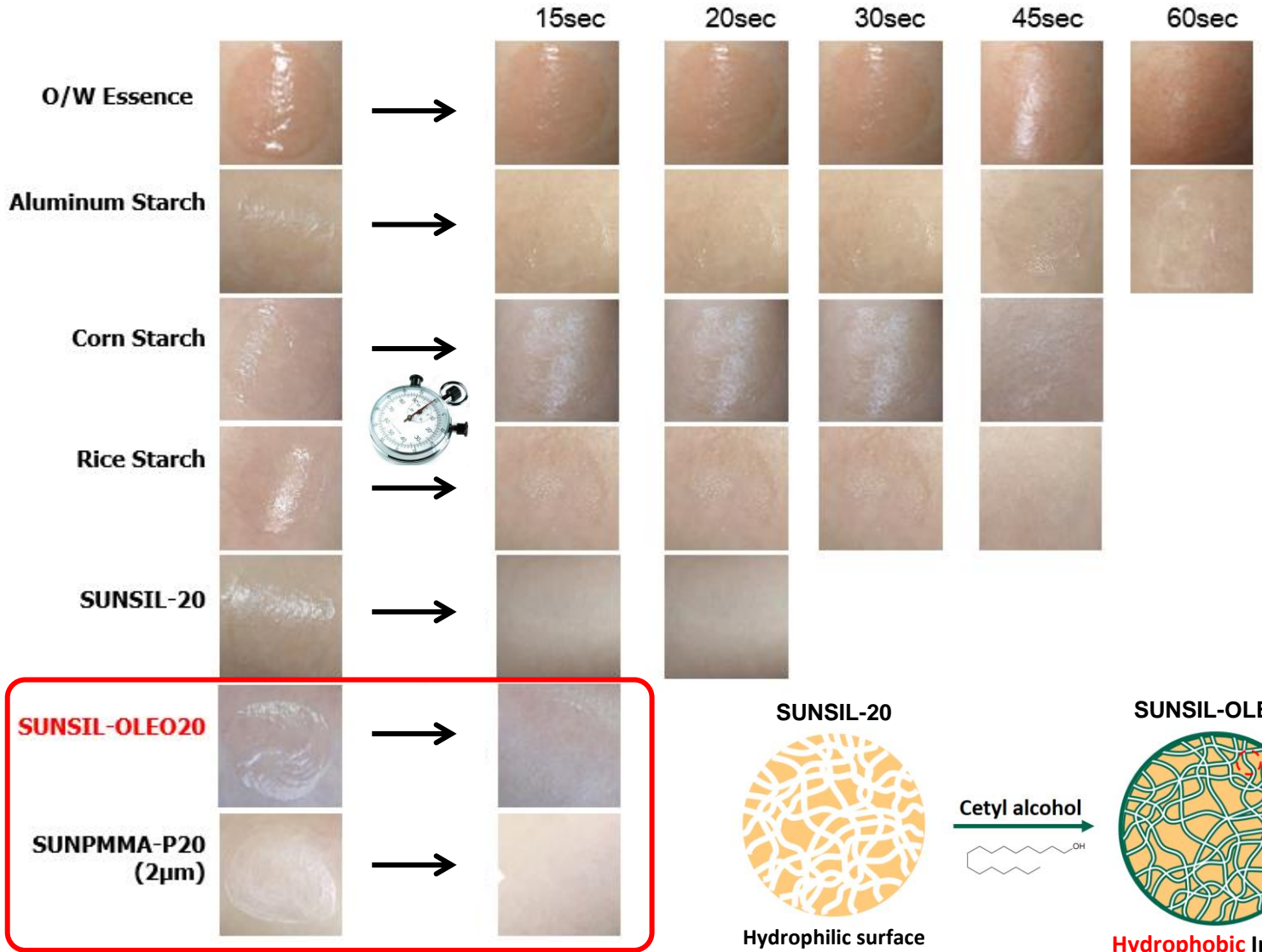


**Particle Size: 7um
Oil absorption: 1.3cc/g**

**Smaller pore
sized(12nm)
Hydrophilic Surface**

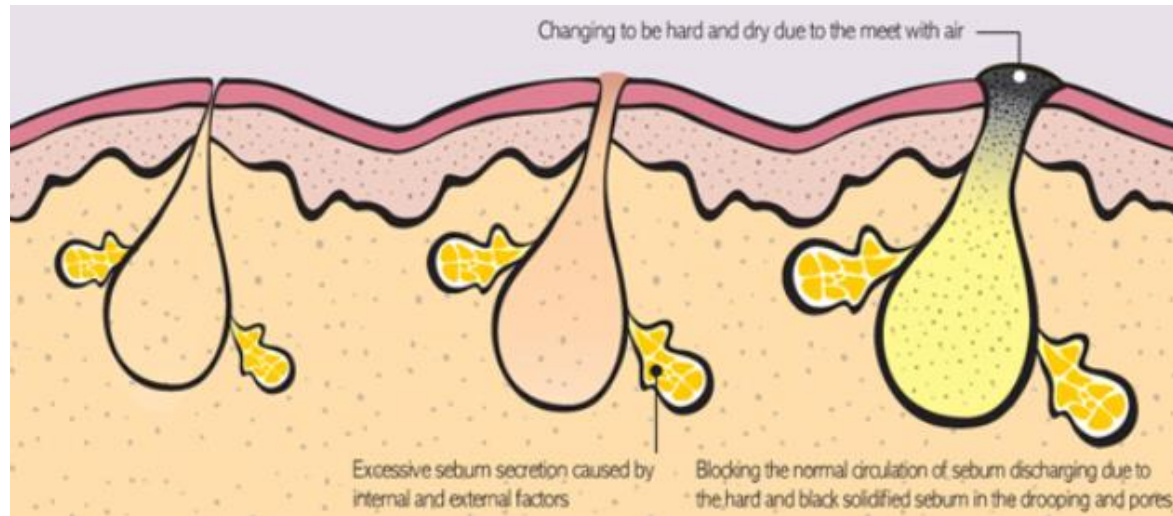
Fast Absorption Test Results

Test Condition: Powder 4%
in O/W Essence



Selective Sebum Absorption

No matter how old you are, you might find yourself with the oily, pore-clogged skin that leads to acne. Oily skin is a result of excess sebum production from sebaceous glands on the face, neck, chest and back. Excess sebum production is in part because of hormones and hereditary factors and commonly persists beyond adolescence. Fortunately, there are a variety of effective ways to control sebum and clear oily skin, regardless of the forces that cause it.



**Need to absorb not moisture
but sebum on skin
Selectively**

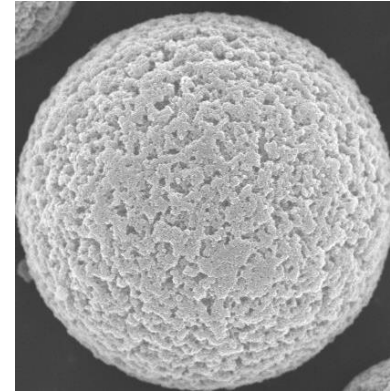
[http://www.ehow.com/
how_7341924_control-
sebum.html](http://www.ehow.com/how_7341924_control-sebum.html)

Hydrophobic Beads

POROUS PMMA Beads

Grade	Avg. Particle size(μm)	Oil Absorption (cc/g)
SUNPMMA-P20	2	1.7~2.1
SUNPMMA-COCO130	8	1.2~1.4
SUNPMMA-COCO170	8	1.6~1.8
SUNPMMA-P	8	1.7~2.1
SUNPMMA-PH	8	2.1~2.4

INCI: Methyl Methacrylate Cross Polymer



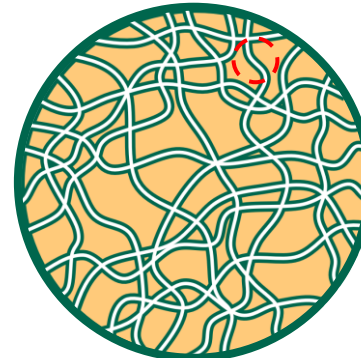
Hydrophobic Interior & Exterior surface

POROUS Silica Beads



Hydrophilic surface

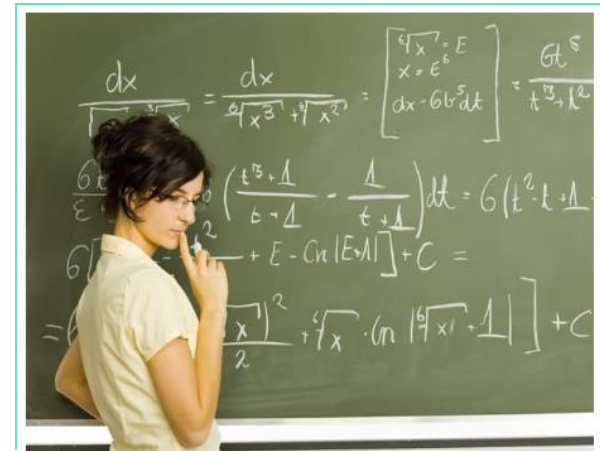
Cetyl alcohol



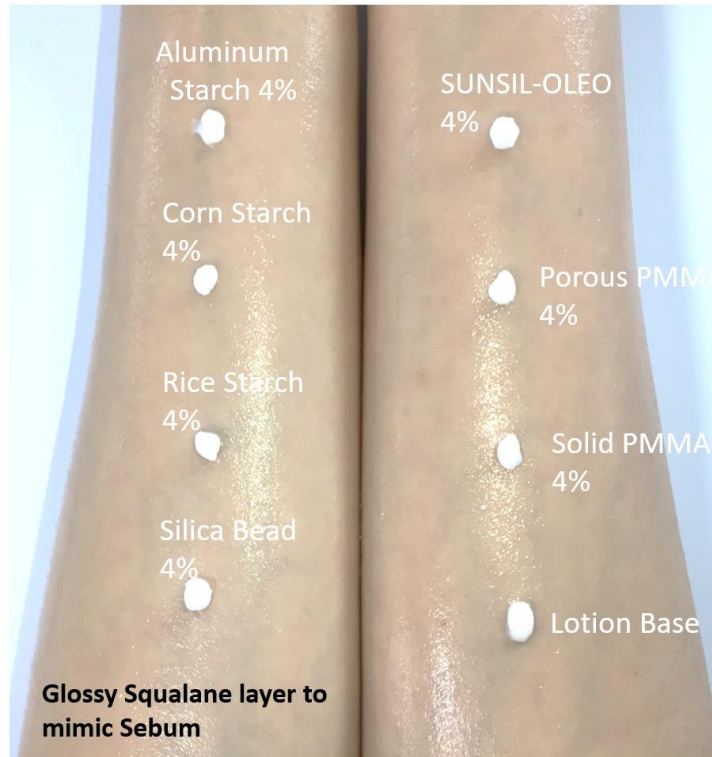
Hydrophobic Interior & Exterior surface

I can understand that **hydrophobic porous** PMMA or SUNSIL OLEO can selectively absorb oil over water when it's dry.

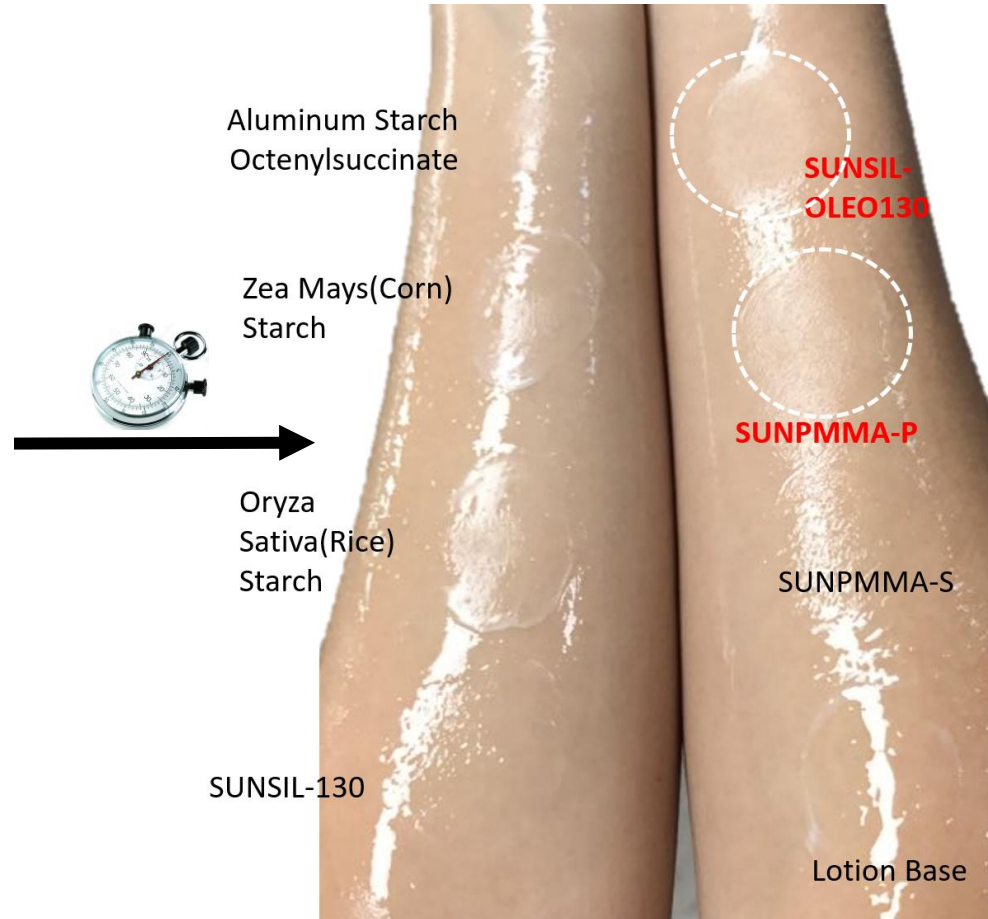
However, if it's in emulsion(i.e. skincare) and it's soaked, can it still absorb oil over water?



Test



Various kinds of sensory powders added into an emulsion



Hydrophobic porous PMMA-P & SUNSIL OLEO in an O/W emulsion can absorb squalane (the most similar to sebum that we could achieve in this investigation) on the skin.