



# Cosmetic

Make-up & Powder  
Two-way Powder Foundation  
Skin care  
Sunscreen  
Eye Brightener, Lipstick  
Pressed Brush Powder  
Nail Polish



## Characteristic of Diasphere<sup>®</sup> for Cosmetic Filler

### Functions

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

### Applications

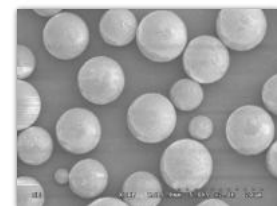
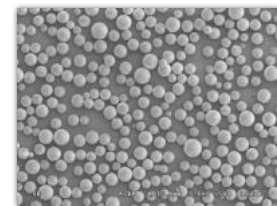
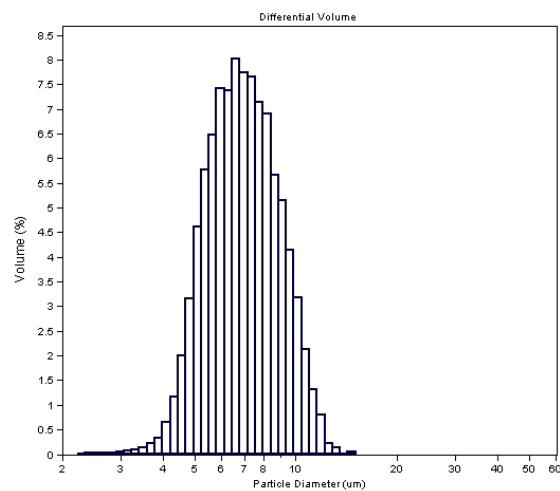
- Make up cosmetic
- Skin care cosmetic
- Personal care cosmetic
- Functional cosmetic

### Grades

Description	INCI	Grade	ParticleSize		Remark
			Avg.( $\mu\text{m}$ )	C.V.(%)	
PMMA	Methyl methacrylate cross polymer	MH-7C	7	<35	Normalbead
		MH-7P	7		Porous bead
		MH-7P++	7		Higher porous bead
Silicone	Polymethylsiloxane	KS-200C	2	<20	Silicone bead
		KS-500	5		
		KS-1000	10		
Silica	Silica	KSS-800TE	8	<60	Triethoxycaprylylsilane coating Silica
		KSS-1000	10		Normal Silica

• C.V.(Coefficient of Variance) : Standard deviation/Avg. size

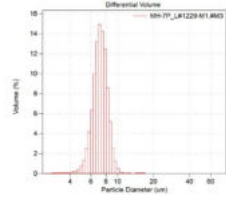
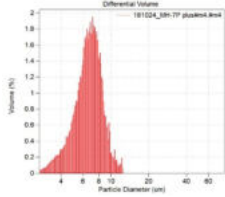
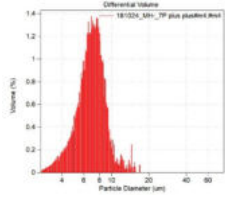
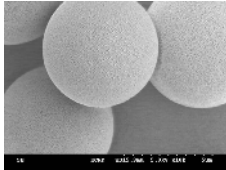
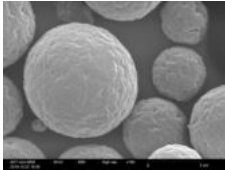
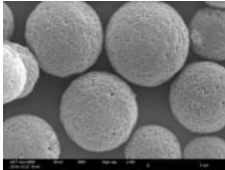
### Features of MH-7C(Polymethylmethacrylate)



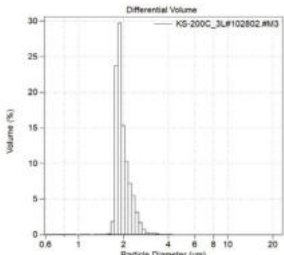
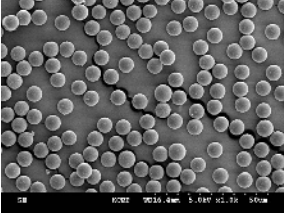
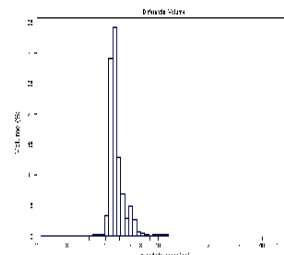
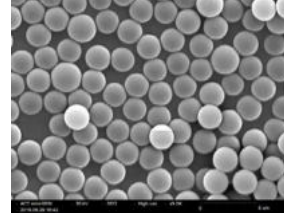
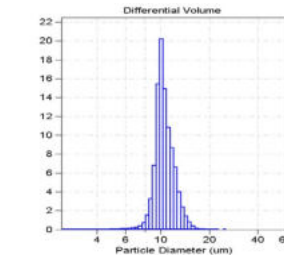
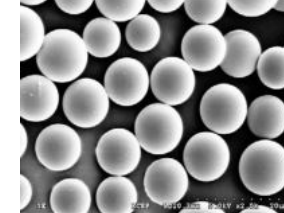
- Average particle size : 7.12 $\mu\text{m}$
- C.V. : 24.7%

# Characteristic of Diasphere<sup>®</sup> for Cosmetic Filler

## Features of MH-7P(Porous Polymethylmethacrylate)

Name	MH-7P	MH-7P +	MH-7P ++
Particle distribution graph			
Particle size(um)	7.034	6.726	7.000
C.V(%)	16.2	24.4	26.6
Oil absorption(cc/g)	0.65	1.15	1.80
SEM Image (10K)			

## Features of KS-Series(Silicone)

<p>KS-200C</p>   <p>• Avg. size : 2um</p>	<p>KS-500</p>   <p>• Avg. size : 5um</p>	<p>KS-1000</p>   <p>• Avg. size : 9um</p>
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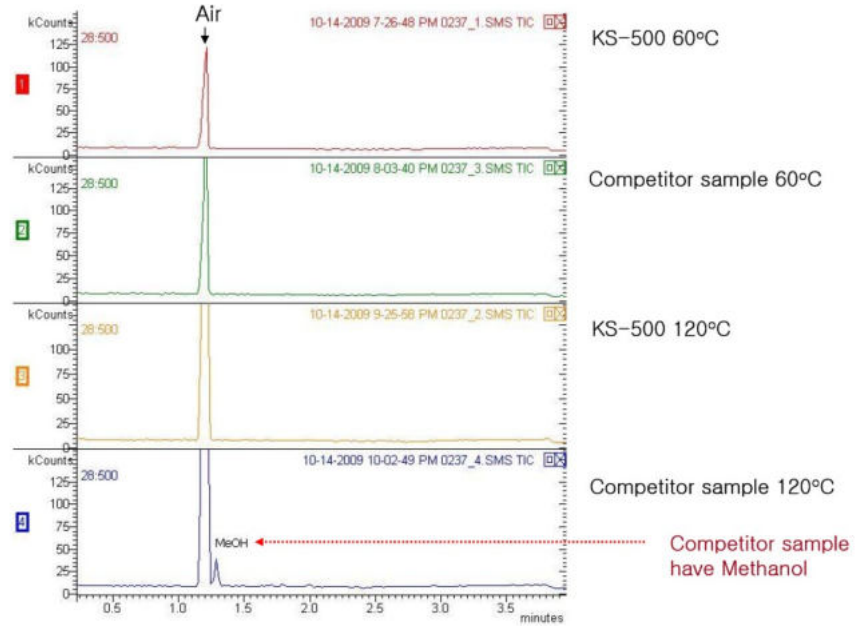
	pH	Moisture Contents(%)	Oil absorption		
			Liquid Paraffine	Propylen Glycol	Butylene Glycol
Competitor	6.7	0.56/0.58/0.61	0.56g	0.56g	0.72g
KS-500	6.8	0.45/0.52/0.62	0.58g	0.58g	0.69g

- Moisture Contents : METTLER TOLEDO 120 °C 30min
- Oil Absorption : Wt. of Sample in grams

## Characteristic of Diasphere<sup>®</sup> for Cosmetic Filler

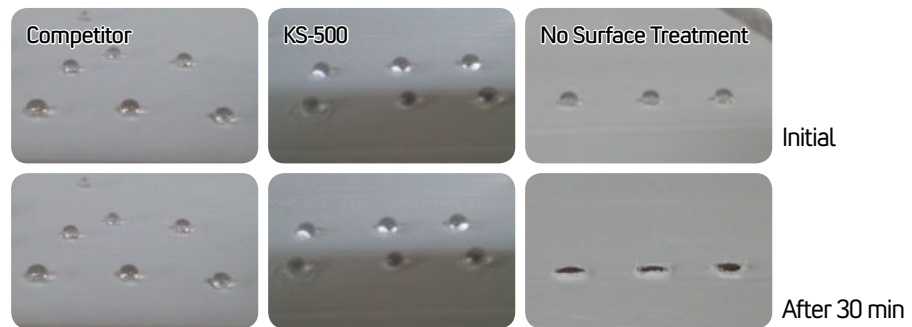
### Features of KS-Series(Silicone)

- No Materials detected 60°C, 120°C in KS-500
- Competitor sample contain MeOH and it comes out 120°C



- We spread the powder in a SUS pan by Roller to form a pressed cake.
- Then, a drop of Butylene glycol was applied through a syringe.

	Contact Angle				Average
	1	2	3	4	
Competitor	102.5	98.6	104.8	100.7	101.65
KS-500	113.9	107.4	103.2	110.3	108.7



# Characteristic of Diasphere<sup>®</sup> for Cosmetic Filler

## Features of Silica

Name	KSS-1000	KSS-800TE
Particle distribution graph		
Particle size(um)	10.0	8.2
Surface Treatment	-	Triethoxycaprylsilane
Oil absorption(cc/g)	1.44	1.21
SEM Image(1.0K)		

## Features of Nylon 12

- Nylon 12, AH-10C, has relatively narrow size distribution and softest features among several types of organic particles.

Name	AH-10C
Particle distribution graph	
Particle size(um)	10.0
CV(%)	22.0
Oil absorption(cc/g)	1.0
SEM Image (1.0K)	

**10% Compressive Strength(MPa)**

Nylon	6.293
Silicone	14.917
PU	9.257
PEMA	10.367
PMMA	27.025

Softest bead: Nylon

**Recovery Rate(%)**

Nylon	4.99
Silicone	94.79
PU	6.41
PEMA	16.01
PMMA	12.71

**Test Method**

- K-Value(10% Compressive Strength): Test Force-19.60mN, Loading Speed-0.892mN/sec
- Compression Recovery Rate : Maximun Force-9.810mN, Minimum Force-0.49mN Loading Speed-0.892mN/sec

## Spreadability Test Results

