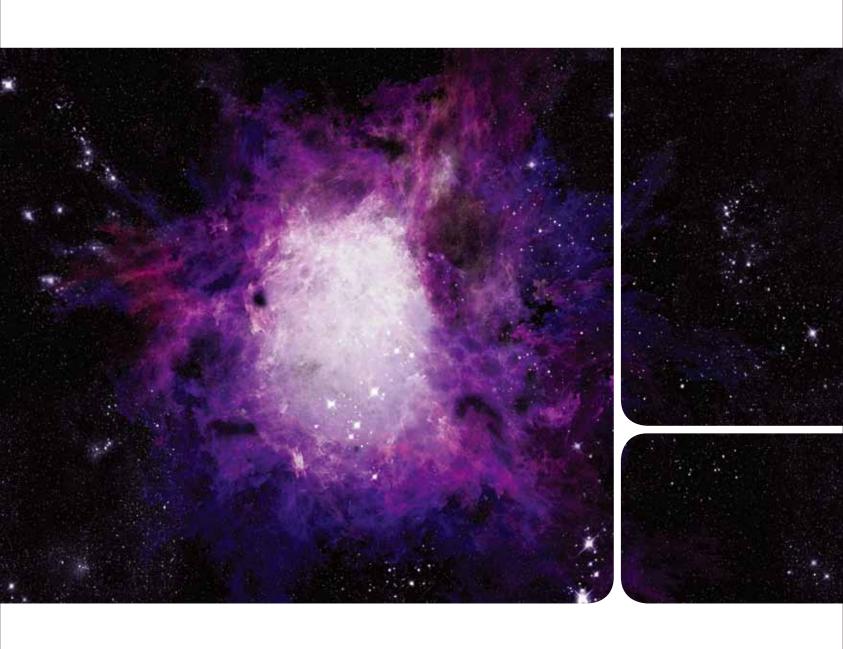
# Mirinae®

Alumina Based Pearlescent Pigments



The world's leader in quality effect pigment technology





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#### Mirinae®

Pearlescent pigments widely used in cosmetics are coated with metal oxides using substrates such as natural mica, synthetic mica, borosilicate, or other platy materials. Mirinae® utilizes man made platy alumina. This material when used as an effect pearlescent pigments generates an extremely soft feel, while at the same time provides unique travel, and appearance properties. To date its use has been limited due to its high cost and relative lack of availability. Technology of manufacturing plate type alumina is a technology which cannot be done without being supported with high technical skill, and one of the internationally recognized technologies. Especially, developing plate type alumina available as pearlescent pigments is regarded as much more difficult technology.

We hold a patented formula for plate type alumina base through creative research and development for years, and have also succeeded in industrial mass production through steady development of process.

Mirinae® brand products are developed based on this technical skill, and composed of plate type alumina itself and plate type alumina based pearlescent pigments products.

### **Brand Story**

Mirinae® is korean ancient language that means "The galaxy".

Mirinae® products are the figurations of the brilliant and clean galaxy, and output which we tried to develop suitable for the precious and mysterious value.

### Special Features

- Pure alumina substrate
- Uniform thickness
- Extremely smooth surface
- Great sparkling effect and color purity
- Low heavy metal content

### **Applications**

Mirinae® products can be applied to all cosmetics product. Especially, when those are applied to make-up product, the effect will be maximized.

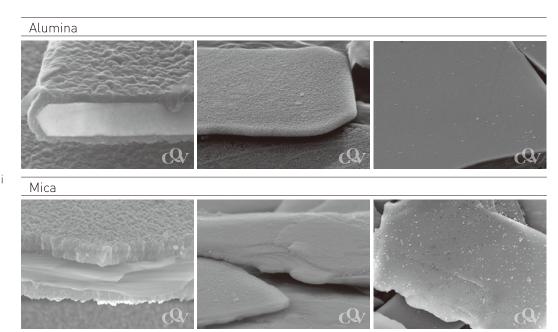
- Eye related products
- Lip related products
- Nail enamel products
- Body and Beauty products

# Why Alumina?

#### FESEM image comparison

Why did we spend a lot of time on developing plate type alumina, and for what merit did we eager so? Above all, we can approach in the micromorphological point of each particle. Plate type alumina is single layered structure and has uniform thickness, but bases used mostly in the existing effect pigments are multi layered structure and have irregular thickness.

This structural difference is a factor that has considerable influence on the pearlescent pigments, because base that refract and reflect light in the same direction is more likely to maximize gloss and color, unique characteristics of the pearlescent pigments.



#### Special Filler Mirinae® A-1000D Alumina Powder

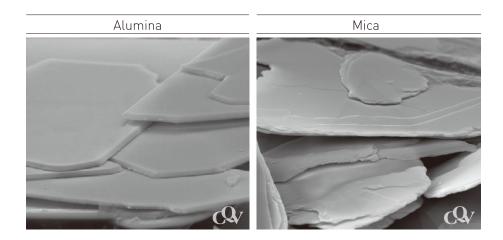
Special Filler is alumina powder product to which surface treatment is not applied, and shows distinctive whiteness and transparency from the existing filler. Also, because surface treatments with various materials which customers need can be applied to special filler, it may be applied to various cosmetics dosage form.



#### The character of color

Because coated surface and also base itself of plate type alumina based pearlescent pigments refract and reflect light in the same direction, every particle expresses same color. But base with multi layered structure shows various colors on a particle.

Also plate type alumina base can express excellent gloss and color, because each particle exists in the almost same shape and the smoothness of surface of it is excellent.



# Composition Data

Code	Product Name	Composition					
		Alumina	SnO <sub>2</sub>	TiO <sub>2</sub>	SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>	
Mirinae® A-1000D	Mirinae® A-1000D Alumina Powder	0					
Mirinae® A-9001K	Mirinae® A-9001K Splendor White	0	0	0			
Mirinae® A-7001K	Mirinae® A-7001K Splendor Gold	0	0	0			
Mirinae® A-7401K	Mirinae® A-7401K Splendor Red	0	0	0			
Mirinae® A-7801K	Mirinae® A-7801K Splendor Blue	0	0	0	0		
Mirinae® A-7901K	Mirinae® A-7901K Splendor Green	0	0	0			
Mirinae® A-6400K	Mirinae® A-6400K Splendor Copper	0				0	
Mirinae® A-6600K	Mirinae® A-6600K Splendor Russet	0				0	
Mirinae® A-9001S	Mirinae® A-9001S Brilliant White	0	0	0			
Mirinae® A-7001S	Mirinae® A-7001S Brilliant Gold	0	0	0	0		
Mirinae® A-7401S	Mirinae® A-7401S Brilliant Red	0	0	0	0		
Mirinae® A-7801S	Mirinae® A-7801S Brilliant Blue	0	0	0			
Mirinae® A-7805S	Mirinae® A-7805S Brilliant Turquoise	0	0	0	0		
Mirinae® A-7901S	Mirinae® A-7901S Brilliant Green	0	0	0			
Mirinae® A-6200S	Mirinae® A-6200S Brilliant Bronze	0				0	
Mirinae® A-6400S	Mirinae® A-6400S Brilliant Copper	0				0	
Mirinae® A-6600S	Mirinae® A-6600S Brilliant Russet	0				0	



### Technical Data

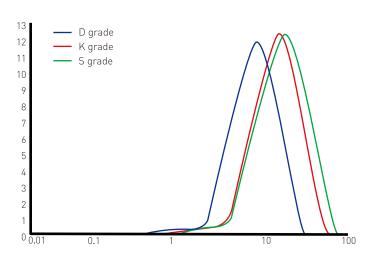
	Particle Size(µm)		рН			
Code	(D10-D90)	(D50)	(10% Sol.)	Loss on Drying (%)	Loss on Ignition (%)	
Mirinae® A-1000D	3 - 30	<10	7 - 11	0 - 1	0 - 0.5	
Mirinae® A-9001K	5 - 30 (More than 80% in range)	15 - 19	5 - 10	0 - 0.5	0 - 0.5	
Mirinae® A-7001K	5 - 30 (More than 80% in range)	15 - 19	5 - 10	0 - 0.5	0 - 0.5	
Mirinae® A-7401K	5 - 30 (More than 80% in range)	15 - 19	5 - 10	0 - 0.5	0 - 0.5	
Mirinae® A-7801K	5 - 30 (More than 80% in range)	15 - 19	5 - 10	0 - 0.5	0 - 0.5	
Mirinae® A-7901K	5 - 30 (More than 80% in range)	15 - 19	5 - 10	0 - 0.5	0 - 0.5	
Mirinae® A-6400K	5 - 30 (More than 80% in range)	15 - 19	7 - 11	0 - 0.5	0 - 0.5	
Mirinae® A-6600K	5 - 30 (More than 80% in range)	15 - 19	7 - 11	0 - 0.5	0 - 0.5	
Mirinae® A-9001S	9 - 45	19 - 23	5 - 10	0 - 0.5	0 - 0.5	
Mirinae® A-7001S	9 - 45	19 - 23	5 - 10	0 - 0.5	0 - 0.5	
Mirinae® A-7401S	9 - 45	19 - 23	5 - 10	0 - 0.5	0 - 0.5	
Mirinae® A-7801S	9 - 45	19 - 23	5 - 10	0 - 0.5	0 - 0.5	
Mirinae® A-7805S	9 - 45	19 - 23	5 - 10	0 - 0.5	0 - 0.5	
Mirinae® A-7901S	9 - 45	19 - 23	5 - 10	0 - 0.5	0 - 0.5	
Mirinae® A-6200S	9 - 45	19 - 23	7 - 11	0 - 0.5	0 - 0.5	
Mirinae® A-6400S	9 - 45	19 - 23	7 - 11	0 - 0.5	0 - 0.5	
Mirinae® A-6600S	9 - 45	19 - 23	7 - 11	0 - 0.5	0 - 0.5	

#### Particle Size Distribution

Mirinae® plate type alumina itself products represent size distribution from 3 to 30  $\mu$ m, and products coated with metal oxide represent from 5 to 30  $\mu$ m (more than 80 %). Because of uniformity of every particle, Mirinae® products represent narrow size distribution.

Miriane® 製品は、サイズは板状アルミナ自体製品は $3-30 \mu m$ 、metal oxideがコーティングされた製品もやは $9.5-30 \mu m$  (80 %以上)の分布を現わし、粒子一つ一つのuniformityのために狭いサイズ分布を現わします。

Mirinae® 産品的基材粒径范围在 $3-30\mu m$ ,经由包覆高折射金属氧化物后的粒径也是 $5-30\mu m$ (80%以上),优化的粒径分布为其优势之一。





# Mirinae<sup>®</sup>

### Alumina Based Pearlescent Pigments



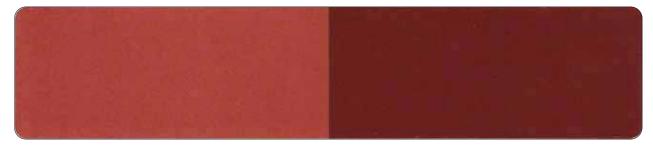
Mirinae® A-7801K Splendor Blue

 $Size(\mu m)~5$  – 30~(More~than~80%~in~range)



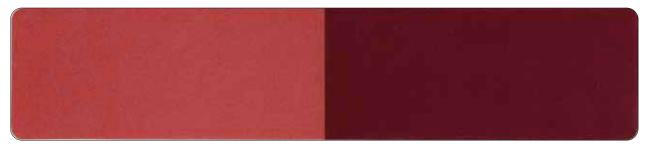
Mirinae® A-7901K Splendor Green Size(μm)

 $Size(\mu m)$  5 - 30 (More than 80% in range)



Mirinae® A-6400K Splendor Copper

Size(µm) 5 - 30 (More than 80% in range)



Mirinae® A-6600K Splendor Russet

 $Size(\mu m)$  5 - 30 (More than 80% in range)









# **CQV GLOBAL NETWORK**

"World Leading Pigments Material Provider"





## 씨큐브 주식회사

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