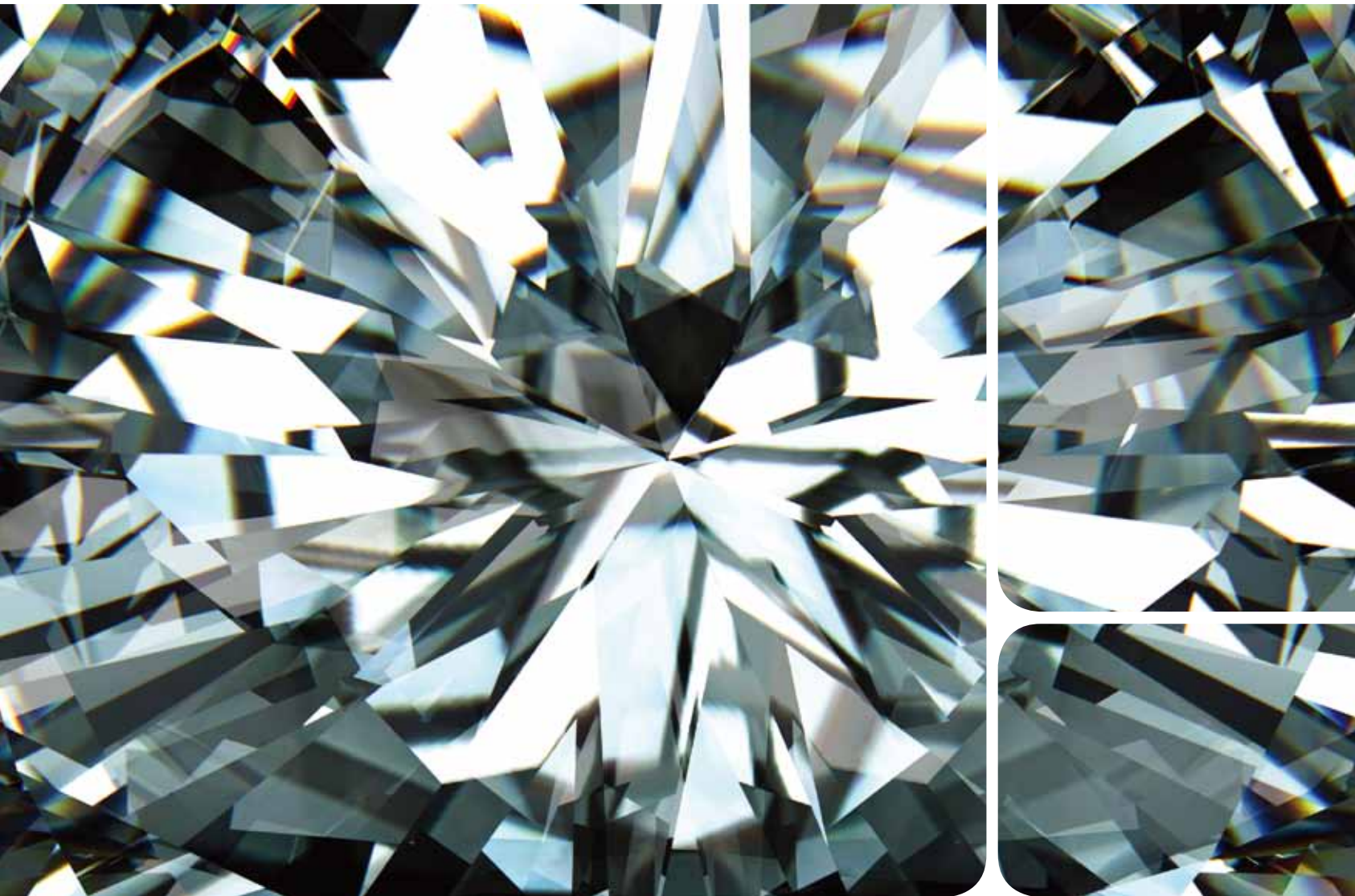


Adamas[®]

Alumina Based Pearlescent Pigments



The World Quality Leader in
Pearlescent Pigments Technology



Adamas®

Alumina Based Pearlescent Pigments



Adamas®

Existing pearlescent pigments are typically manufactured using natural, synthetic mica, glass, or silica substrates. A more specialized category is based on a platy alumina.

In the manufacture of alumina-based pearlescent pigments the most important factor is creating the platy type alumina itself which is used as the base substrate. The technology involved with the manufacture of amorphous alumina is highly specialized and requires a great degree of technical and process capability and thus has been commercialized by only a few companies.

CQV Co., Ltd. through extensive research and development has been granted a patent for their formula and manufacturing process to produce platy type alumina. They have commercialized the Adamas® platy alumina product line based on these developments and grafted them to the existing technology of manufacturing pearlescent pigments for mass production.

Brand Story

Adamas® is the word "diamond" in ancient Greek.

The Adamas® name implies products which have a sparkling and perceived value like a diamond. Thus when incorporated into end use products they impart this same precious value in the eye of the consumer.

Special Features

- Pure platy alumina (Al_2O_3) substrate
- Uniform thickness
- Extremely smooth surface
- Great sparkling effect and color purity
- Suitable for multiple industry applications

Applications

Adamas® pigments can be applied to various fields of industry because of their excellent chemical and physical properties. Used correctly the properties of alumina based pearlescent pigments can help in developing truly distinctive products.

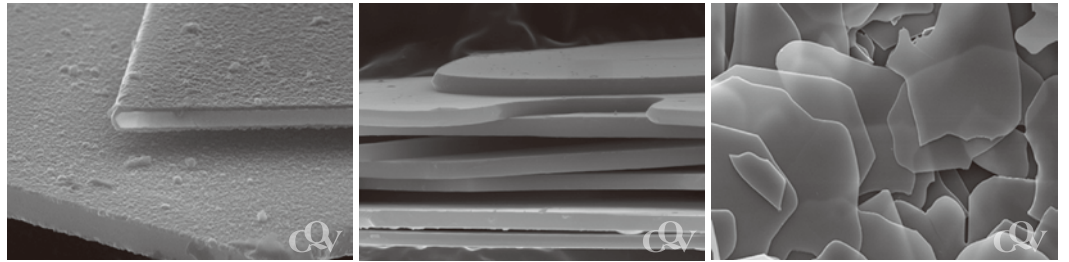
- Coatings
- Architectural
- Printing Inks
- Plastics
- Artificial leather
- Wall Paper

Why Alumina?

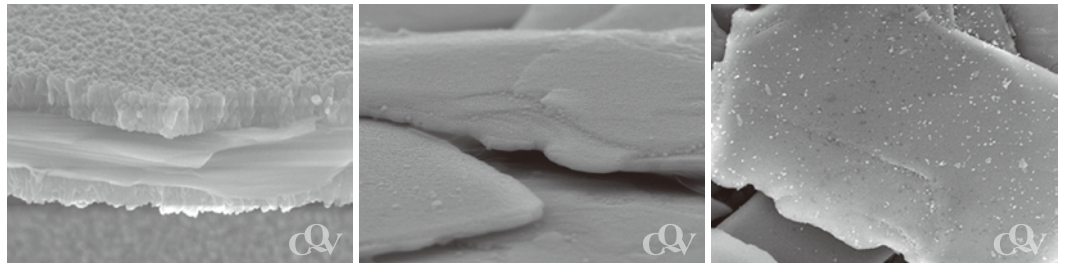
FESEM image comparison

Each particle of an pearlescent pigment is composed of a layer structure. Observation of SEM pictures show platy type alumina is composed of one layer with extremely uniform thickness. Existing mica based particles are composed of a layer structure in which the thickness of every particle is not uniform. It varies with the individual particles and within individual particles.

Alumina



Mica



Special Filler Adamas A-100D Alumina Powder

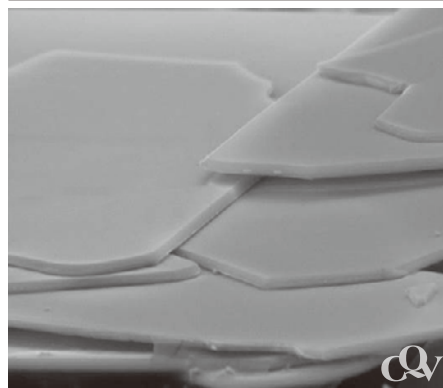
Because platy type alumina has inherent whiteness and transparency it can be used as unique filler quite distinct from other filler options. It can help express a more luxurious feeling when incorporated into various coatings.



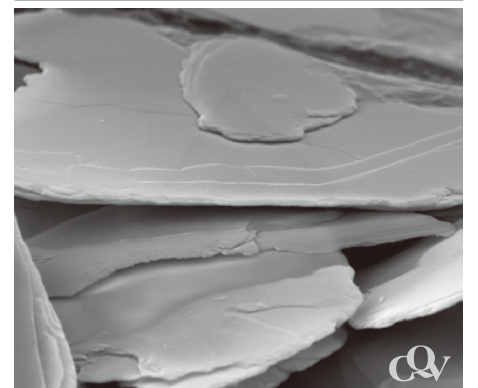
The character of color

In the case of platy type alumina coated with a high refractive index metal oxide, irregular differences in thickness of the substrate particles can cause a serious difference in the wavelengths of light that are reflected. This is evident under a microscope where individual particles show several different reflection colors. Substrates with uniform thickness can reflect all of the light at the same angle and wavelength, creating a color through interference that is strong and pure. In this case each individual particle observed show uniform color throughout.

Alumina



Mica



Adamas®

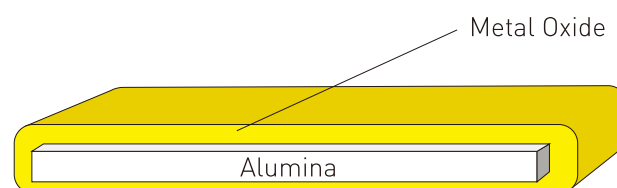
Alumina Based Pearlescent Pigments

Structure of Adamas®

Adamas® products are coated with high refractive index metal oxides of uniform thickness on the alumina substrate of equally uniform thickness, which is observed in the structural diagram.

Adamas®製品は厚さが一定なアルミナ基質に高屈折金属酸化物を一定の厚さでコーティング処理した製品で、アルミナ基質パールの構造的な塗色図で確認できるでしょう。

三氧化二铝(Al_2O_3)基材包覆规律化的高折射金属氧化物厚度结构图。

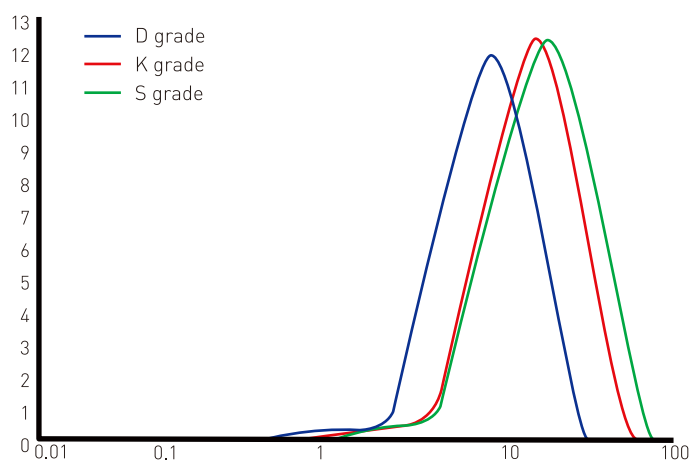


Particle Size Distribution

Adamas® uncoated platy type alumina substrate is composed of a particle size distribution from 3 to 30 μm . Products coated with metal oxide have a particle size distribution from 5 to 30 μm . Due to the uniformity of every particle, Adamas® pigments can be produced in very narrow particle size distributions.

Adamas®製品は、サイズは板状アルミナ自体製品は3-30 μm 、metal oxideがコーティングされた製品もやはり、5-30 μm (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。

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



Composition Data

Code	Product Name	Composition					
		Alumina	SnO ₂	TiO ₂	SiO ₂	Fe ₂ O ₃	Others
Adamas® A-100D	Adamas® A-100D Alumina Powder	o					
Adamas® A-901K	Adamas® A-901K Splendor White	o	o	o			
Adamas® A-701K	Adamas® A-701K Splendor Gold	o	o	o			
Adamas® A-741K	Adamas® A-741K Splendor Red	o	o	o			
Adamas® A-781K	Adamas® A-781K Splendor Blue	o	o	o	o		
Adamas® A-791K	Adamas® A-791K Splendor Green	o	o	o			
Adamas® A-640K	Adamas® A-640K Splendor Copper	o				o	
Adamas® A-660K	Adamas® A-660K Splendor Russet	o				o	
Adamas® A-901S	Adamas® A-901S Dazzling White	o	o	o			
Adamas® A-701S	Adamas® A-701S Dazzling Gold	o	o	o	o		
Adamas® A-741S	Adamas® A-741S Dazzling Red	o	o	o	o		
Adamas® A-781S	Adamas® A-781S Dazzling Blue	o	o	o			
Adamas® A-785S	Adamas® A-785S Dazzling Turquoise	o	o	o	o		
Adamas® A-791S	Adamas® A-791S Dazzling Green	o	o	o			
Adamas® A-620S	Adamas® A-620S Dazzling Bronze	o				o	
Adamas® A-640S	Adamas® A-640S Dazzling Copper	o				o	
Adamas® A-660S	Adamas® A-660S Dazzling Russet	o				o	
Adamas® AMP-1093K	Adamas® AMP-1093K Splendor Black	o					Nickel
Adamas® AMP-1090S	Adamas® AMP-1090S Brilliant Black	o					Nickel

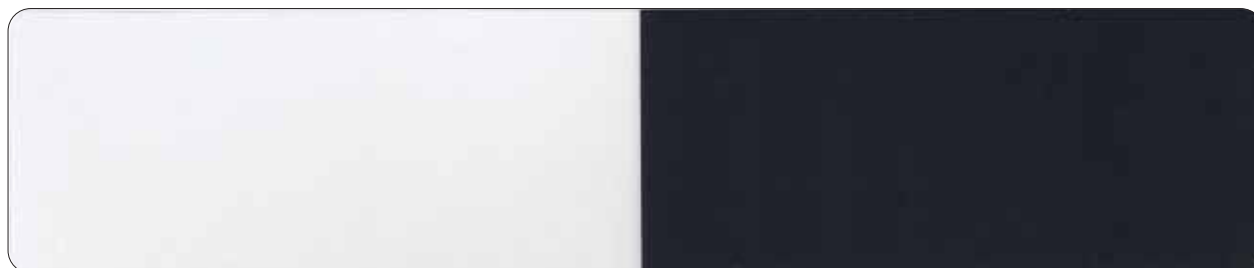
Adamas®

Alumina Based Pearlescent Pigments Technical Data

Code	Particle Size(µm)		pH (10% Sol.)	Loss on Drying (%)	Loss on Ignition (%)
	(D10-D90)	(D50)			
Adamas® A-100D	3 - 30	<10	7 - 11	0 - 1	0 - 0.5
Adamas® A-901K	5 - 30 (More than 80% in range)	15 - 19	5 - 10	0 - 0.5	0 - 0.5
Adamas® A-701K	5 - 30 (More than 80% in range)	15 - 19	5 - 10	0 - 0.5	0 - 0.5
Adamas® A-741K	5 - 30 (More than 80% in range)	15 - 19	5 - 10	0 - 0.5	0 - 0.5
Adamas® A-781K	5 - 30 (More than 80% in range)	15 - 19	5 - 10	0 - 0.5	0 - 0.5
Adamas® A-791K	5 - 30 (More than 80% in range)	15 - 19	5 - 10	0 - 0.5	0 - 0.5
Adamas® A-640K	5 - 30 (More than 80% in range)	15 - 19	7 - 11	0 - 0.5	0 - 0.5
Adamas® A-660K	5 - 30 (More than 80% in range)	15 - 19	7 - 11	0 - 0.5	0 - 0.5
Adamas® A-901S	9 - 45	19 - 23	5 - 10	0 - 0.5	0 - 0.5
Adamas® A-701S	9 - 45	19 - 23	5 - 10	0 - 0.5	0 - 0.5
Adamas® A-741S	9 - 45	19 - 23	5 - 10	0 - 0.5	0 - 0.5
Adamas® A-781S	9 - 45	19 - 23	5 - 10	0 - 0.5	0 - 0.5
Adamas® A-785S	9 - 45	19 - 23	5 - 10	0 - 0.5	0 - 0.5
Adamas® A-791S	9 - 45	19 - 23	5 - 10	0 - 0.5	0 - 0.5
Adamas® A-620S	9 - 45	19 - 23	7 - 11	0 - 0.5	0 - 0.5
Adamas® A-640S	9 - 45	19 - 23	7 - 11	0 - 0.5	0 - 0.5
Adamas® A-660S	9 - 45	19 - 23	7 - 11	0 - 0.5	0 - 0.5
Adamas® AMP-1093K	9 - 40	18 - 22	7 - 10	0 - 0.5	0 - 0.5
Adamas® AMP-1090S	9 - 50	26 - 30	7 - 10	0 - 0.5	0 - 0.5

Adamas[®]

Alumina Based Pearlescent Pigments



Adamas[®] A-100D Alumina Powder Size(μm) 3 - 30



Adamas[®] A-901K Splendor White Size(μm) 5 - 30 (More than 80% in range)



Adamas[®] A-701K Splendor Gold Size(μm) 5 - 30 (More than 80% in range)



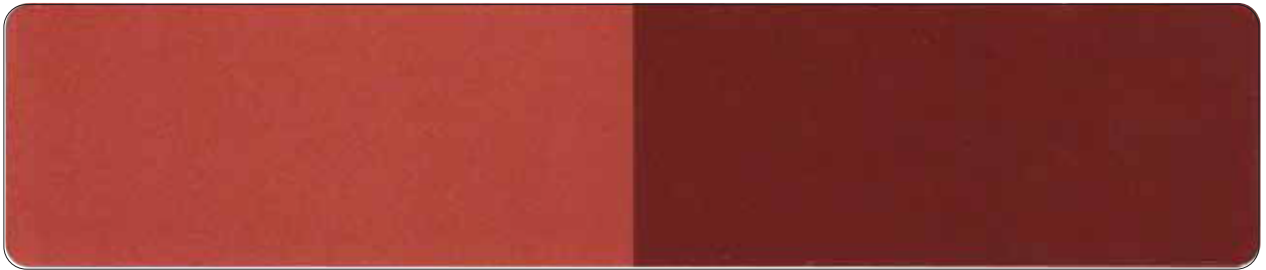
Adamas[®] A-741K Splendor Red Size(μm) 5 - 30 (More than 80% in range)



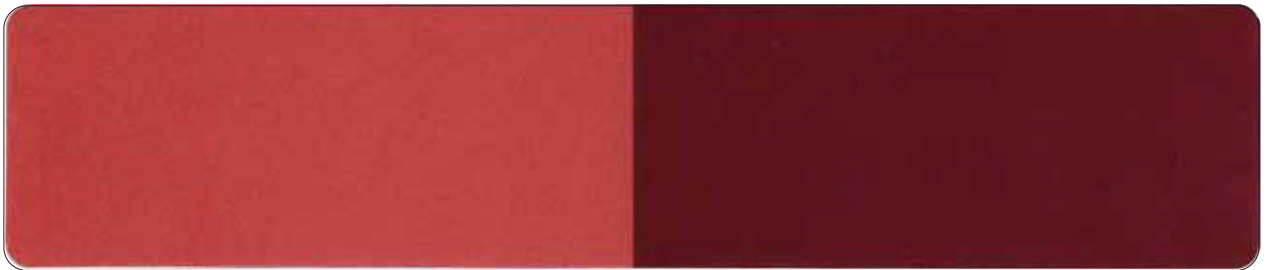
Adamas[®] A-781K Splendor Blue Size(μm) 5 - 30 (More than 80% in range)



Adamas® A-791K Splendor Green Size(μm) 5 - 30 (More than 80% in range)



Adamas® A-640K Splendor Copper Size(μm) 5 - 30 (More than 80% in range)



Adamas® A-660K Splendor Russet Size(μm) 5 - 30 (More than 80% in range)



Adamas® A-901S Dazzling White Size(μm) 9 - 45



Adamas® A-701S Dazzling Gold Size(μm) 9 - 45



Adamas® A-741S Dazzling Red Size(μm) 9 - 45



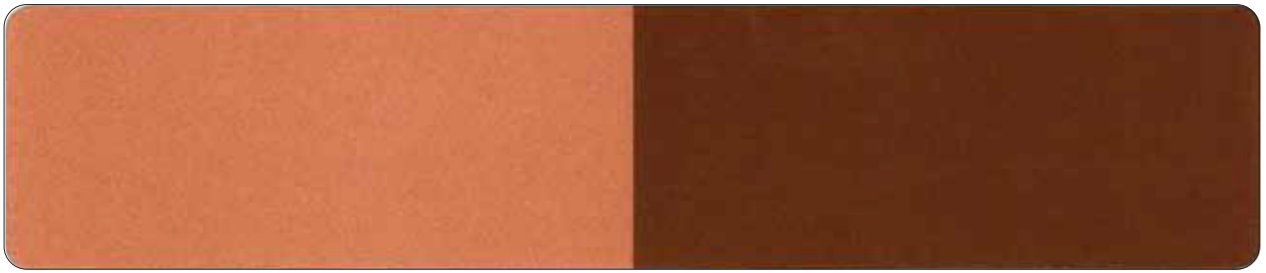
Adamas® A-781S Dazzling Blue Size(μm) 9 - 45



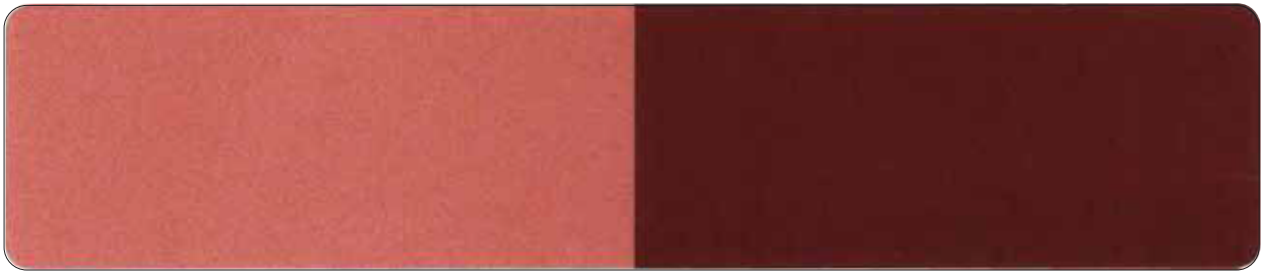
Adamas® A-785S Dazzling Turquoise Size(μm) 9 - 45



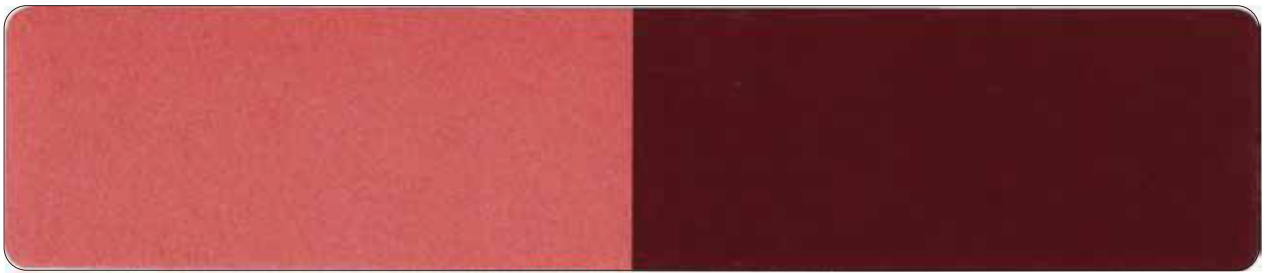
Adamas® A-791S Dazzling Green Size(μm) 9 - 45



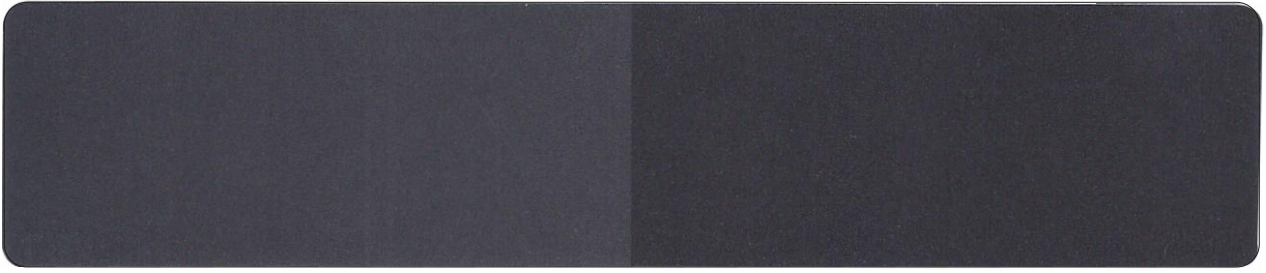
Adamas® A-620S Dazzling Bronze Size(μm) 9 - 45



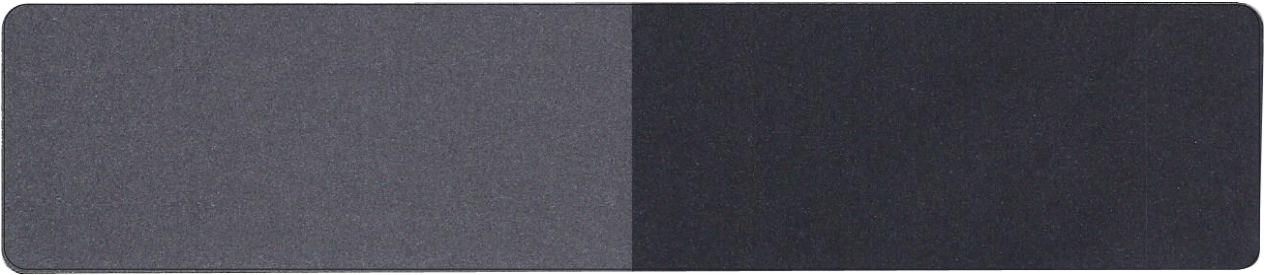
Adamas® A-640S Dazzling Copper Size(μm) 9 - 45



Adamas® A-660S Dazzling Russet Size(μm) 9 - 45



Adamas® AMP-1093K Splendor Black Size(μm) 9 - 40



Adamas® AMP-1090S Brilliant Black Size(μm) 9 - 50

CQV GLOBAL NETWORK

“World Leading Pigments Material Provider”



Creation of Quality Value

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