

## Innovative, Colorful and Application dedicated

### The overview on KUNCAI's news on European Coatings Show 2023

Kuncai, the leading and largest global pearlescent pigment manufacturer with core competencies in manufacturing processes and unique expertise in synthetic mica, is introducing its latest product developments at the European Coatings Show. Take the opportunity to gain first-hand information and explore extensive styling possibilities and excellent product properties on the Kuncai booth. You will also find all the relevant new information presented at the ECS contained in these pages..

#### NEW PRODUCTS

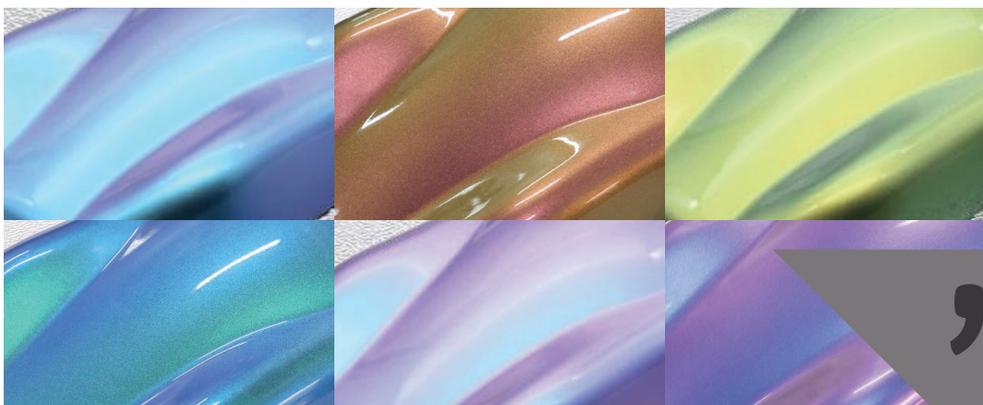
##### SMOOTH AS SILK COLOR TRAVEL Chameleon Creams on synthetic mica

Discover velvety smooth, intense color changes in cool shades that offer robust hiding. The adapted small particle size distribution results in a homogeneous, pure color impression. From green/yellow to light red/yellow to vibrant purple, turquoise and blue, color

tones are heightened and smoothly blend into each other as the light direction and viewing angle change. With excellent hiding power and a sumptuous metallic luster, Chameleon Creams demonstrate strong color saturation and seamless but pronounced color travel. Chameleon Creams are based on synthetic mica (fluorophlogopite), which exhibits and supports color purity, brightness, and reflective power.

##### EVERY SHADE OF PURPLE From casual to glam with Kyntaline purples

A complex color of many different facets from spiritual blues to rosy reds, violet is considered to be the one of the most complex colors. It creates a balance between the spiritual blue of the sky and the fiery red of the earth. Intensive and rich pigment color tones in shades of blue and red give industrial products an outstandingly bright chroma and exceptional reflectivity. Created without the



” Pure and homogeneous color impression in cool shades. “

addition of organic colorants, Kyntaline Purples exhibit an impressively intense and pure body color, vibrant sparkle, and good hiding power. The color is stable without risk of bleeding, fading or migration in every final application. The Kyntaline Purples product series is based on synthetic mica (Fluorphlogopite), which delivers purity of color, brightness, and outstanding reflective power.

**NO SHIELDING WITH INTENSE EFFECT**  
**Wavemaster pigments increase the reflection intensity of laser radar signals**

**WAVEMASTER**  
 Functionality and Effect

Silvers are one of the main colors when it comes to mobility. For innovative vehicle systems radar transparent Silvers are one of the most attractive color of the future.



Kuncai's Wavemaster 211 and 221 give you impressive effects and high functional transparency levels.

The Wavemaster smart pigments series is based on a specially engineered synthetic mica substrate combined with an innovative outer coating that create a pronounced metallic luster at the same time as offering a sensitive but robust reflection flake structure without any metal content.

Composition	CAS no.	Chameleon Creams	Kyntaline Purples	Wave-master	Neomica
Mica	12001-26-2			on request	X
Synthetic Fluorphlogopite	12003-38-2	X	X		
Titanium Oxide (TiO <sub>2</sub> )	13463-67-7	X	X		X
Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> )	1309-37-1		X		(X)
Tin Oxide (SnO <sub>2</sub> )	18282-10-5	X	X		X
Silicon Dioxide (SiO <sub>2</sub> )	7631-86-9	X			
Particle Size Distribution (µm)		10 - 45	10 - 45	10 -30 and 10 - 45	5- 25 10-45 10 - 60
pH Value		7.0 - 11.0	4.0 - 7.0	7.0 - 11.0	8.0 - 10.0

Instead of possessing the strong shielding effects that metal-based pigments have on millimeter-wave radar signals, the Wavemaster pigment series does not block any signals or even noticeably weaken them. Depending on the application, Wavemaster pigments can even increase the laser radar signal reflection intensity. This applies to effect pigment coatings in sensor technology applications for automatic flight, driving, security and other scenarios.

**NEOMICA COLORS**  
 New colors from the next generation of natural mica pearls

Neomica sets a new standard for traditional effect pigments based on natural mica. Using a special production treatment, the performance of the finished product has been greatly enhanced compared to standard, traditional natural mica pearls. With Neomica, the particle size of the pigment was improved to guarantee optimal hiding power and reflection properties. On top of that, the metal oxide coating of the pigment was augmented with additional SnO<sub>2</sub> to further enhance the performance of this product range. The Neomica series is based on natural mica from Brazil. At this year's ECS, Kuncai is presenting fresh new interference colors, two gold tones and a metallic effect in addition to the already available silver white forms of the Neomica series.

**NEOMICA**  
 Product properties

- Increased hiding power
- Good value-in-use ratio
- Less yellowish on light background colors
- Improved reflection properties
- New interference, gold and metallic color tones



## STYLING POTENTIAL

### UNDERLINE PERSONALITY

#### Hybrid color stylings with XillaMaya and Setallic

It is not easy to realize highly colorful stylings for demanding applications with standard effect pigments. Hybrid colors bridge the distance between the physical and the virtual world in our multidimensional world. First they are rooted in nature (real world) and in an age of technology they also follow the trend of digitalization and artificial intelligence (virtual world). An intelligent combination of intensive organic pigments and extremely reflective, strong color effect pigments build the symbiosis of these two worlds. XillaMaya range takes the brightness and depth of styling colors to a new level. Setallic elevates metallic reds and oranges to a new, superior dimension. The result is a color that is distinctive and eye-catching yet also harmonious. It can thus be used to highlight the personality of the owners of outstanding objects.

### BLACK WITH IMPACT

#### Rich blacks with vibrant effects

Coatings must not only be colorful, but also have to meet a multitude of different requirements depending on the industry, the application and the end-use of the manufactured goods. Color perception of black is one thing, the technical performance over the lifetime of a coating another. Orion Engineered Carbons and Kuncai have pooled their key competencies to create

KUNCAI product	particle size (µm)	Exterior grades	Synthetic Mica
XillaMaya T60-25 SW Cosmic Turquoise	6 - 30	X	X
XillaMaya T60-26 SW Space Violet	6 - 30	X	X
XillaMaya T60-27 SW Electric Blue	6 - 30	X	X
Kyntaline KC818V Nebular Purple	10 - 45		X
Setallic KC820-M2 SW Solar Orange	10 - 45	X	X
Setallic KC820-M5 SW Auspicious Red	10 - 45	X	X

black color stylings with high performance effect pigments. The result is a range of carbon blacks with the special qualities of Kuncai Chameleon and XillaMaya pigments. By using colorful effect pigment in the top layers of the coating, it is possible to produce different shades of dark blacks with virtually no blurring of the intensity of the original color.

### BRIGHT AND RESISTANT

#### New color ideas for coil & high temperature coatings

Colored and pearlescent effects are challenging to achieve for highly demanding fluorocarbon and high temperature coatings. For this reason, silver white effect pigments are standard for these kinds of applications. But life is color. That is why Kuncai believes in the maxim of bringing color to the world and has developed colorful effect pigments for high temperature applications, especially for the coil coating industry. These are concept colors in bright yellow, red and intense silver white based on synthetic mica and glass flakes. They offer a temperature resistance of up to 250 °C with a weathering performance that is comparable to a standard exterior grade from the Kuncai portfolio.

### PURE AND SUSTAINABLE

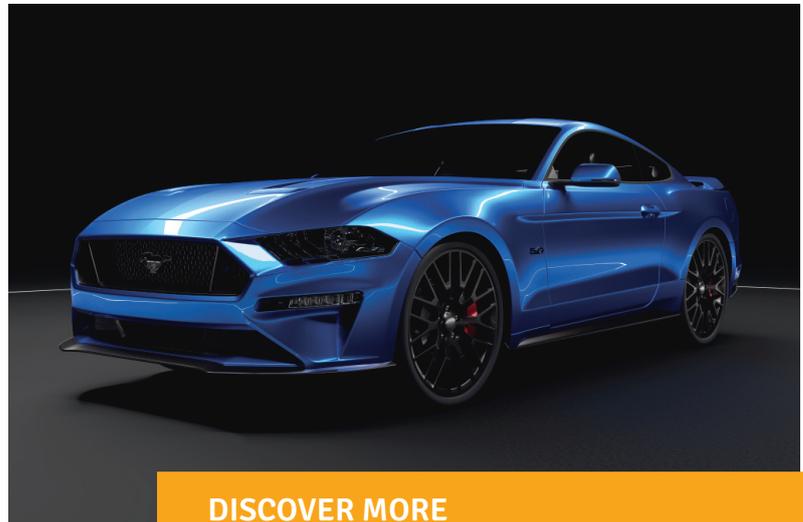
The use of synthetic mica as a substrate enhances the performance of effect pigments and offers additional benefits.

- Brilliance
- Color Intensity
- High sparkle
- Industrially produced

## WELCOME TO THE METAVERSE

### Produce realistic 3D animation with Kuncai effect pigments

Finding a way to display effect pigments in a digital format has been one of the major challenges in recent times. It has not been easy to give a realistic impression of the final appearance of the end product with a specific effect color and thus provide designers, manufacturers and coatings companies with inspiration. Based on fast evolving digital technologies, however, Kuncai has in cooperation with partner organizations, developed a system that offers photorealistic 3D animations which can demonstrate all the details of an effect pigment and color such as its reflection properties, sparkle, appearance under different light conditions, body color and reflection color. The system can be adapted to any object that can be made available in a CAD file. Using a multistep approach of scanning, surface generation, 3D modelling, animation, video and photos, the object can be displayed in a large variety of existing effect color tones.



### DISCOVER MORE

Visit us and see how the Metaverse works for KUNCAI effect and find out about more interesting topics:



## CREATORS OF PIONEERING EFFECT PIGMENTS

### Kuncai - Your partner for the future

Kuncai is the leading manufacturer for synthetic mica based effect pigments. A patented, optimized production process ensures consistent and easily reproduced mica quality standards. Production of synthetic mica is fully integrated into the other effect pigment production processes at the manufacturing sites. In addition Kuncai continuously develops its R&D, application know-how and quality controls to fulfill the requirements of highly demanding application areas

## KUNCAI Facts and Figures

- Founded in 1999
- 4 production plants
- Global Sales organization
- Headquartered in Fuqing, Fuzhou Province, China
- Listed on the Shanghai Stock Exchange (Stock no. 603826)
- Production of natural mica, synthetic mica, and borosilicate effect pigments, TiO<sub>2</sub>, iron oxides
- Production of iron chloride and titanium oxychloride for own manufacturing processes

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