

# Acrylic Copolymer Beads

## Applications

### Colorants for paints/ inks

- When colored beads are formulated into a vehicle, they provide a soft texture and rich designability that are not achievable with conventional paints.
- Our beads are also applicable to writing inks.

### Surface treatment agent

- These products allow for controlled formation of surface irregularities in the coating, delivering a highly durable matte finish. Other anticipated effects include anti-blocking, stain resistance, and applications for inkjet printer paper.

### Optical functional materials

- Our clear beads exhibit high transparency and are capable of realizing high light transmittance and diffusion (high haze level) by adjusting the refractive index.
- Therefore, our clear beads can be applied to applications requiring high light diffusion properties.

### Coloring materials for cosmetic application

- It offers enhanced spreadability, feel, and dispersibility. Moreover, composite fine particles designed to encapsulate functional materials show great potential as innovative cosmetic ingredients. We also offer product development tailored to your specific needs.

## Representative Products

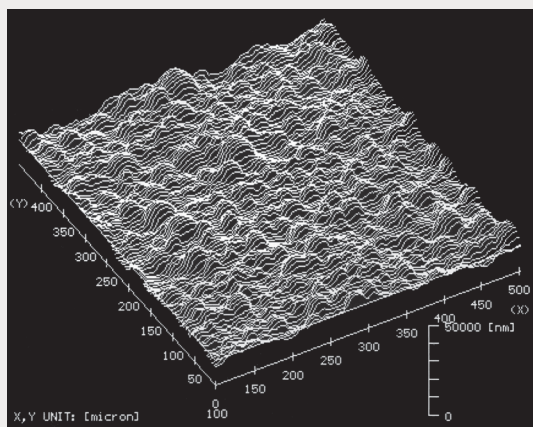
Product name	Main pigments used	C. I. Generic Name	Average particle size ( $\mu\text{m}$ )
224(SMD)Black	Carbon black	PBk-7	2~3
230(SMD)Clear	—	—	
030(10MD)Clear	—	—	7~9
230(MD)Clear	—	—	
KL501Clear	—	—	8~10
224(11F)Black	Carbon black	PBk-7	10~12
010(F)White	Titanium oxide	PW-6	17~20
020(F)Black	Carbon black	PBk-7	
030(F)Clear	—	—	
230(F)Clear	—	—	34~42
020(IWA)Black	Carbon black	PBk-7	
030(X)Clear	—	—	

## Characteristics

- Spherical acrylic polymer fine particles developed using our proprietary resin synthesis technology. They are available in both clear and pigment-colored types.
- We offer various grades with different particle sizes: SMD, MD, F, and X types.
- Because of the cross-linked structure of copolymer, our beads have excellent solvent resistance, heat resistance, weather fastness and mechanical strength.

## Evaluation Results

### ■ Bird's-eye view of coating film surface (200x)

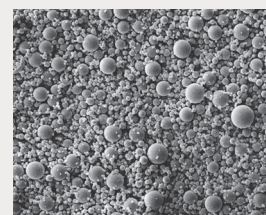


Average particle size :  $18\mu\text{m}$ , Maximum height difference of coating film :  $25\mu\text{m}$

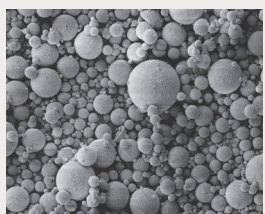
### ■ Electron micrographs (500x)



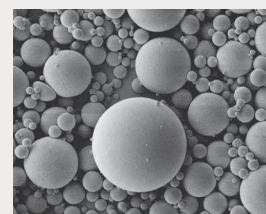
230(SMD) Clear



230(MD) Clear



030(F) Clear



030(X) Clear