

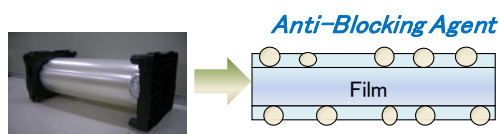
NIPPON SHOKUBAI Particle Products

Date 2022/12/14

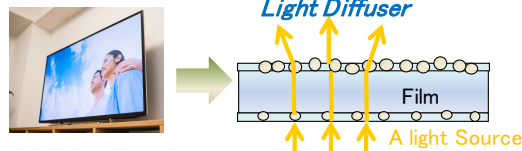
Date 2022/12/1								
Products	Chemical Structure	Type	Average particle size (μm)	Distribution	Form	Physical Property		Applications
						Refractive index	Specific gravity	
Zirconia particles								
ZIRCOSTAR	Crystalline zirconia dispersion in MEK (concentration of 70%)	ZP-153	0.01	narrow	dispersion	approx.1.8 (particles)	-	・ Nanofillers with a high refractive index ・ Materials for adjusting the Abbe number and refractive index ・ Dental materials
	Crystalline zirconia dispersion in benzyl acrylate (concentration of 80%)	HR-101	0.01	narrow	dispersion	approx.1.8 (particles) 1.67 (on an as is basis)	-	
Silica particles								
SEAHOSTAR	Amorphous silica (EG dispersion : conc.20%)	KE-E10	0.1	narrow	dispersion	1.43 (silica)	1.2 (silica=2.0)	・ Fillers for semiconductor sealing materials ・ Anti-blocking agents ・ Fillers for liquid crystal sealing agents
		KE-E30	0.3					
		KE-E150	1.5					
	Amorphous silica (water dispersion : conc.10~20%)	KE-W10	0.1	narrow	dispersion	1.43 (silica)	1.1 (silica=2.0)	
		KE-W30	0.3					
		KE-W50	0.5					
	Amorphous silica	KE-P10	0.1	narrow	powder	1.43	1.9	
		KE-P30	0.3					
		KE-P50	0.5					
		KE-P100	1					
		KE-P150	1.5					
		KE-P250	2.5					
		KE-S30	0.3	narrow	powder	1.43	2.2	
		KE-S50	0.5					
		KE-S100	1					
		KE-S150	1.5					
		KE-S250	2.5					
	Surface modification Type		0.1~2.5	narrow	powder	1.43	2.2	
Organic-inorganic hybrid particles								
SOLIOSTAR RA	Organic-inorganic hybrid	product	3.5	narrow	powder	1.54	1.1	・ Particles for antireflective films ・ High precision gap control agents
			3.5			1.59	1.1	
			4.8			1.55	1.2	
			5			1.52	1.2	
			5			1.57	1.2	
			6			1.54	1.2	
		developing	2~80			1.5~1.6	1.1~1.4	
		Acrylic、Acrylic-Styren particles						
EPOSTAR MV	Cross-linked-polymethacrylate resin	MV1002	2	broad	powder	1.51	1.2	・ Anti blocking agent ・ Light diffusion agents ・ Matting agents ・ Void forming agents
		MV1004	4					
		MV1006	6					
		MV1010	10					
EPOSTAR MA	Cross-linked-poly-styrene-methacrylate resin	MA2003	3	broad	powder	1.56	1.2	・ Light diffusion agents for optical films
EPOSTAR MX	Cross-linked-polymethacrylate resin (water dispersion : conc.7.5~10%)	MX020W	0.02	narrow	dispersion	1.54	1.2	・ Slipping agents ・ Void forming agents ・ Film reinforcing agents
		MX030W	0.04					
		MX050W	0.07					
		MX100W	0.15					
		MX200W	0.35					
		MX300W	0.45					
Melamine-Benzoguanamine particles								
EPOSTAR	Benzoguanamine-formaldehyde resin	MS	2	broad	powder	1.66	1.4	・ Toner additives ・ Light diffusion agents ・ Matting agents
		M05	5					
		L15	9					
	Benzoguanamine-melamine-formaldehyde resin	M30	3	middle	powder	1.66	1.4	
		SS	0.1					
	melamine-formaldehyde resin	S	0.2	narrow	powder	1.66	1.5	
		FS*	0.2					
		S6	0.4					
		S12	1.2					

*Low formalin type

➤ General-Purpose Film(PET,PP etc.)

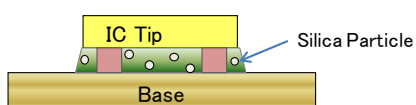


➤ Optical Applications

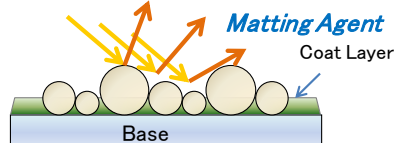


➤ Semiconductor packing

Filler for underfill



➤ Optical Applications



➤ Electro Photographic Printing Toner Additives



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