

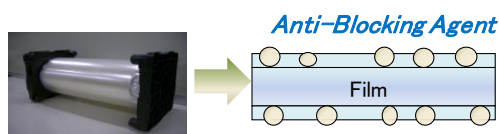
NIPPON SHOKUBAI Particle Products

Date 2022/12/14

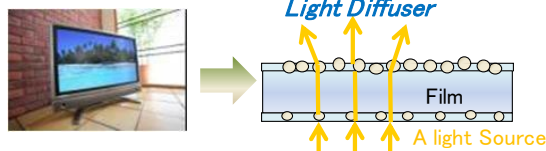
Products	Chemical Structure	Type	Average particle size (μm)	Distribution	Form	Physical Property		Applications				
						Refractive index	Specific gravity					
Zirconia particles												
ZIRCOSTAR	Crystalline zirconia dispersion in MEK (concentration of 70%)	ZP-153	0.01	narrow	dispersion	approx.1.8 (particles)	-	<ul style="list-style-type: none"> 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)	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Toner additives Light diffusion agents Matting agents 				
		M05	5									
		L15	9									
	Benzoguanamine-melamine-formaldehyde resin	M30	3	middle	powder	1.66	1.4					
		melamine-formaldehyde resin	SS	0.1	narrow	powder	1.66		1.5			
	S		0.2									
	FS*		0.2									
	S6		0.4									
	S12		1.2									

*Low formalin type

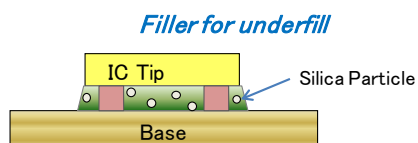
➤ General-Purpose Film(PET,PP etc.)



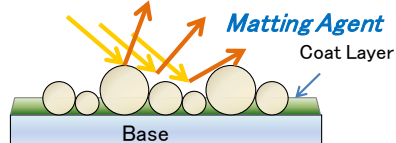
➤ Optical Applications



➤ Semiconductor packing



➤ Optical Applications



➤ Electro Photographic Printing



Division for inquiry : E & I Materials Sales & Marketing Dept.

(Tokyo) TEL:03-3506-7590 FAX:03-3506-7597

(Osaka) TEL:06-6223-9191 FAX:06-6223-9236