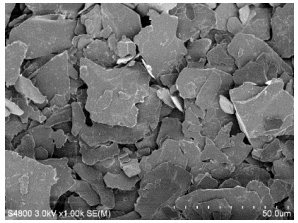
Micro TiO_2 Composite Sericite

- By combining sericite JS-A with fine particle titanium dioxide grants an UV shielding effect.
- MTE-57ST (35nm TiO_2 composite sericite) has an excellent UV shielding effect.
- MTE-77ST (80nm TiO_2 composite sericite) can also expect to have a blue-light protection effect.

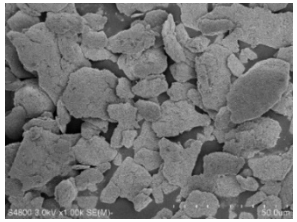
Composition

INCI	MTE-57ST	MTE-77ST
MICA	53.4%	
TITANIUM DIOXIDE	43.7%	
STEARIC ACID	2.9%	

SEM Image

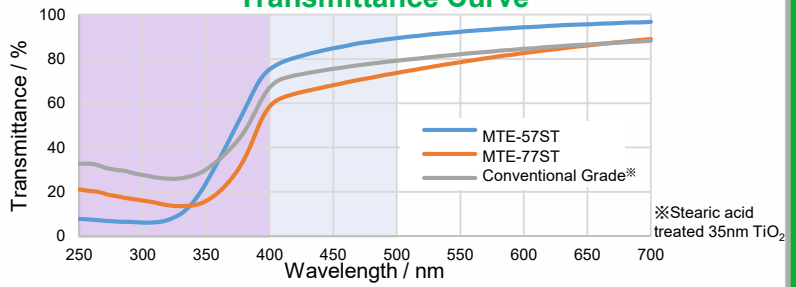


JS-A



MTE-57ST

Transmittance Curve



Formulation	: W/O emulsion	Application method	: Automatic Bar Coater
Dosage	: 7%(as powder)	Base	: Polypropylene film
Film thickness	: 10μm	Measurement	: Spectrophotometer HITACHI U-4100

Emulsion Evaluation

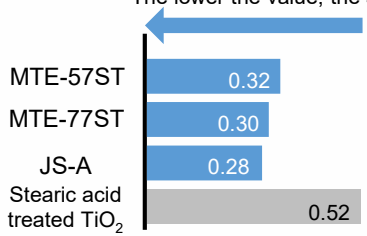
SPF/UVAPF *in vitro*

Sample	SPF	UVAPF
MTE-57ST	26	8
MTE-77ST	13	11
Stearic acid treated TiO_2	5	4

Formulation	: W/O emulsion
Dosage	: 10%(as TiO_2)
Amount of coating	: 1.3mg/cm²
Base	: PMMA
Measurement	: SPF Analyzer UV-2000S

Comparison of Average Coefficient of Friction

The lower the value, the smoother



Amount of coating	: 2.0mg/cm²
Base	: Artificial leather
Load	: 50g
Speed	: 1.0mm/sec
Measurement	: Friction tester KES-SE (Kato-tech Co., Ltd)

Sericite JS Series

		JS-A	JS-1	JS-S
Characteristics		Smooth feeling, High transparency	Moist feeling, Matte feeling	Crystalline silica free
INCI		MICA	MICA	MICA
Whiteness※1		≧ 90.0	≧ 90.0	≧ 90.0
Loss on drying※2	%	≦ 1.0	≦ 1.0	≦ 1.0
Loss on ignition※3	%	≦ 2.0※4	≦ 9.0	≦ 2.0※4
Acid solubles※3	%	≦ 2.0	≦ 2.0	≦ 2.0
Lead※5	ppm	≦ 10	≦ 10	≦ 10
Arsenic※5	ppm	≦ 2	≦ 2	≦ 2
Antimony※5	ppm	≦ 5	≦ 10	≦ 5
Cadmiun※5	ppm	≦ 3	≦ 3	≦ 3
Mercury※5	ppm	≦ 1	≦ 1	≦ 1

※1 : Hunter's method ※2 : 5.0g, 105℃ Constant weight ※3 : JSQI 2006, Sericite purity test (1)
※4 : US FDA「§ 73.1496 MICA(b)」 ※5 : Total dissolution analysis using atomic absorption spectrometer