MICRO TITANIUM DIOXIDE

MT-200ST

Characteristics

Aluminum-free / Excellent Dispersibility / Excellent Photostability

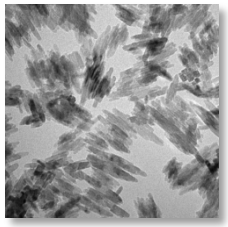
Composition

INCI CODE	%
TITANIUM DIOXIDE	85.0
STEARIC ACID	15.0

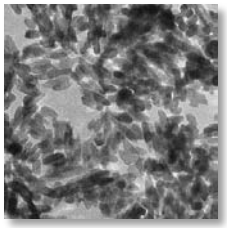
General Information

Item	Central value
Appearance	White Powder
Crystal Structure	Rutile
Loss on drying (%)	0.4
Loss on ignition (%)	14
Property of Surface	Hydrophobic

TEM Image

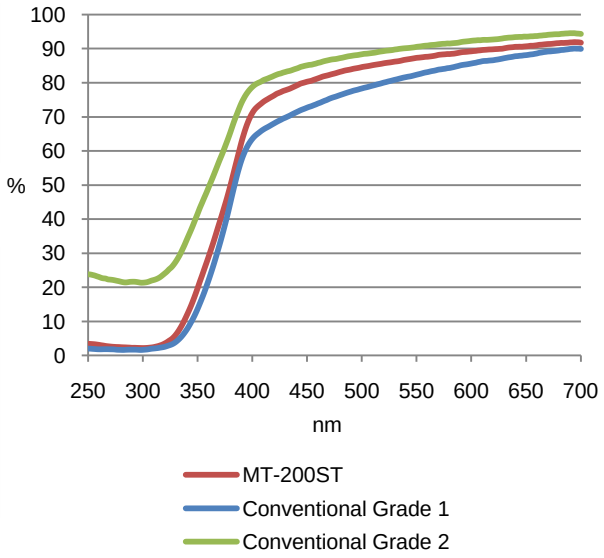


MT-100TV



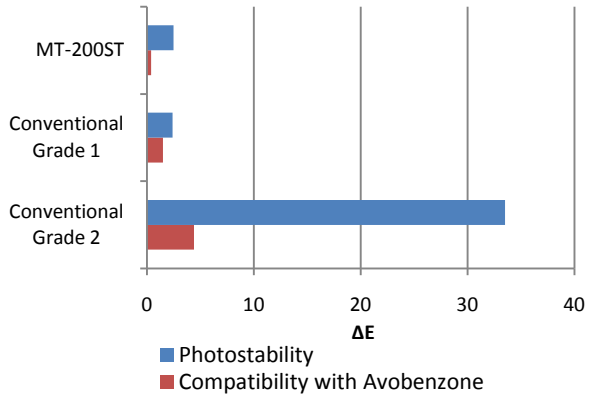
MT-200ST

Transmittance Curve



Formula :	W/S Emulsion	
Oil phase:	CYCLOPENTASILOXANE	45 %
	PEG-9 Dimethicone	5 %
	Powder	7 %
Water phase:	Water	36 %
	BG	7 %
Thickness :	12 µm	
Substrate :	Polypropylene	
Measurement:	HITACHI U-4100 Spectrophotometer	

Photostability & Compatibility



Photostability Test

Sample:	Butylene Glycol / TiO_2 = 4 / 3
Mixing:	3 minutes.
Exposure:	Sunlight 1 hour
Measurement:	L, a, b (MINOLTA CHROMA METER CR-200)
Degree of discoloration:	$\Delta E = (\Delta L^2 + \Delta a^2 + \Delta b^2)^{1/2}$

The greater the value of ΔE, the stronger the Photo activity.

Compatibility Test

The Following is the formulation of measuring reactivity with Avobenzone.

Sample:	Finsolv TN -Alkyl Benzoate- includes Avobenzone 1wt%) / TiO_2 = 4 / 3
Reference:	Finsolv TN / TiO_2 = 4 / 3
Mixing:	1 minutes.
Measurement:	L, a, b (MINOLTA CHROMA METER CR-200)

Measure the degree of the change (ΔE) in color of each sample against the reference.
The greater the value of ΔE, the stronger the chemical reactivity.

TAYCA