



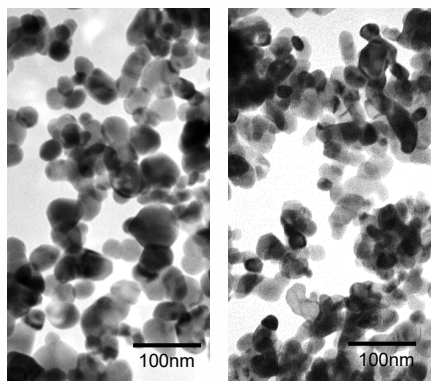
# New Zinc Oxide with High UVA Protection MZN-A1

- MZN-A1 is a new zinc oxide that optimizes the particle shape (spherical) and particle size (40 nm) by an unique manufacturing method which enables to shield UVA more efficiently.
- Due to its excellent dispersibility, the original function of zinc oxide (high transparency and high UVA shielding ability) are exhibited at a high level.

## Product Information

Item	MZN-A1
INCI	ZINC OXIDE TRIETHOXYCAPRYLYLSILANE
Primary Particle Size	40nm
Appearance	White - Pale Yellow
Surface Characteristics	Hydrophobic

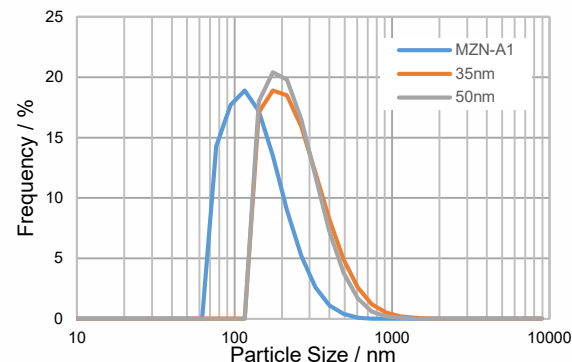
## TEM Image



MZN-A1

Conventional  
Zinc Oxide (35nm)

## Particle Size Distribution



Measurement : Particle Size Analyzer FPAR-1000  
Medium : Cyclopentasiloxane  
Concentration : 0.5%

## Emulsion Evaluation

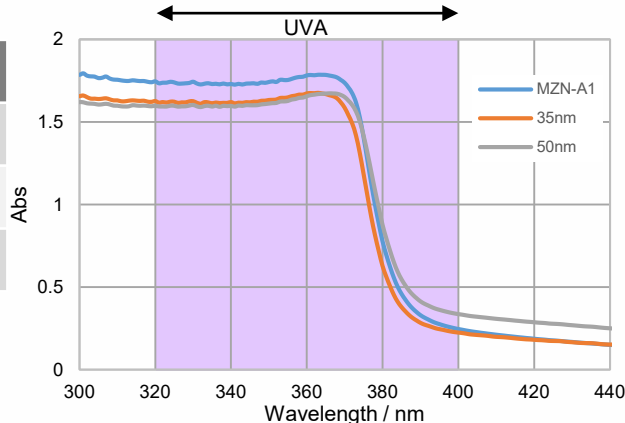
SPF/UVAPF *in vitro*

Sample	SPF	UVAPF	CWL
MZN-A1	44	21	374
35nm	36	17	372
50nm	34	19	375

### Each Measurement Condition

Formulation : W/O emulsion  
Dosage : 25%  
Amount of coating : 1.3mg/cm<sup>2</sup>  
Base : PMMA  
Measurement : SPF Analyzer UV-2000S

## Absorbance Curve



## Transparency

