

# Organic solvent-based / Solvent free-based Ultra-high refractive titania sol

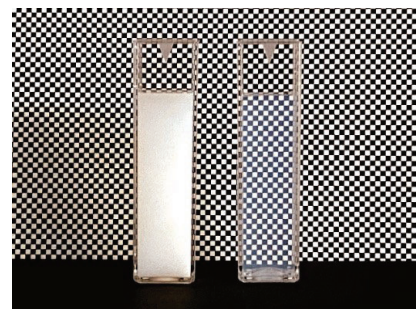
**TAYCA**

## Characteristic

- ▼ Higher transparency and higher refractive index (R.I.) than slurry achieved through the build-up process.
- ▼ Our unique surface treatment process makes it compatible with a wide range of resins.

## Expected Applications

- ▼ Ultra-high refractive hard coating
  - ▼ Ultra-high refractive coating liquid
- Example: Optical element for smartphone,  
Diffraction-optical element for AR glasses

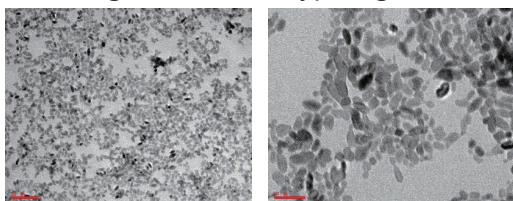


Slurry Sol

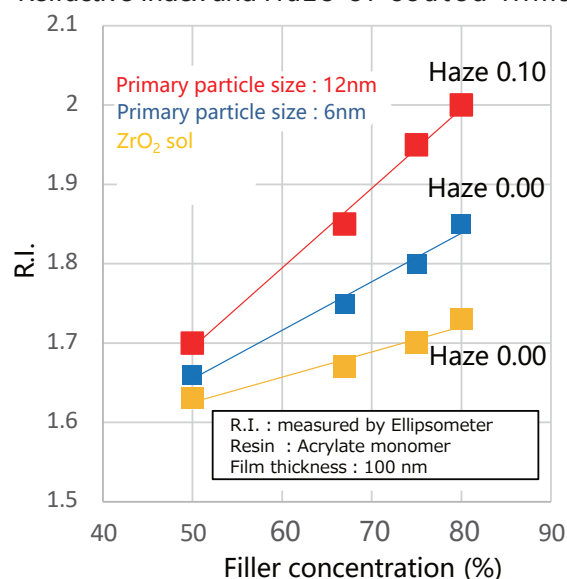
## Organic solvent-based

	Standard NS405	High transparency NS604	High refractivity NS560
Primary particle size	6nm	6nm	12nm
Dispersed particle size	25nm	15nm	40nm
Solid content	35 ~ 55%		
Solvent	PGMEA, PGME, MEK, EA etc.		

- ▼ TEM image (left :6nm type, right :12nm type)



- ▼ Refractive Index and Haze of coated films



## Solvent free-based

	NS483	Prototype①	Prototype②
Solvent	Monofunctional acrylate monomer	Monofunctional acrylate monomer	Multifunctional acrylate monomer
Solid content	30 %	55 %	55 %
R.I. increase rate※	+ 0.1	+ 0.2	+ 0.2
Characteristic	Low viscosity	High refractive	High resilience

※This shows R.I. difference with the monomer.

- ▼ Material design suited to your needs

