

TiO₂ Paste – Reflector Rutile@SiO₂

Paste of rutile SiO₂ coated TiO₂ particles for reflection layer of DSSCs

This TiO₂ paste is essentially similar to rutile TiO₂ paste, however, the rutile particles are coated using a thin layer of SiO₂, in order to inhibit the electrical conductivity. In dye sensitized solar cells, a rutile@SiO₂ reflector layer only shows optical effect, and due to being an insulator, plays no electrical role in the solar cell device. The paste can be applied by blade coating or screen printing. By thermal treatment, at around 100 °C the solvent is evaporated, at below 400 °C the binder is removed and at >500 °C nanocrystals are sintered into a sufficiently good conductivity film.

PST-RS Technical Specifications		
Particles: TiO ₂ –Rutile coated with SiO ₂	Packaging and Order Number	
Particle Size: 250-500 nm, SiO ₂ shell: ~70 nm	PST-400RS-1G	1 g
Concentration: 28 wt%	PST-400RS-5G	5 g
Physical Form: Paste	PST-400RS-10G	10 g
Color: White	PST-400RS-20G	20 g
Storage: 2-8 °C		

Standard Iodine-based Electrolyte

DSSC electrolyte in acetonitrile

Standard electrolyte contains I⁻/I₃⁻ redox in acetonitrile solvent. With this electrolyte high current can be obtained with dye sensitized solar cell devices. However, acetonitrile is a low boiling point solvent and suitable sealing of cell is required.

ELT-ACN-I Technical Specifications		
Redox couple: I ⁻ /I ₃ ⁻	Packaging and Order Number	
Solvent: Acetonitrile	ELT-ACN-I-1ML	1 mL
Additives: 8%	ELT-ACN-I-5ML	5 mL
Physical Form: liquid	ELT-ACN-I-10ML	10 mL