

Lencolo 5021 (784) UV Photoinitiator

CAS#: 125051-32-3

Description

Lencolo 5021 is a highly efficient photoinitiator for visible-light cure systems. Its initiation mechanism is neither Norrish-type cleavage nor hydrogen abstraction. Upon absorbing visible light, PI-21 undergoes photo-isomerization to generate a cyclic photoreactive intermediate, which performs a ligand-exchange reaction with the ester carbonyls of acrylates in oligomers or reactive diluents, thereby generating radicals to initiate polymerization and crosslinking. In addition, it exhibits a pronounced photobleaching effect after photolysis, enabling deep-cure performance. It is particularly suitable for thick-film visible-light curing, and can cure coating layers greater than 70 μm in thickness.

Technical Data

Molecular Formula	$\text{C}_{30}\text{H}_{22}\text{F}_4\text{N}_2\text{Ti}$
Molecule Weight (g/mol)	534.4
Composition	Bis-2,6-difluoro-3-pyrrolephenyl titanocene
Appearance	Yellow or orange powder
Melting Point (°C)	160 - 162
Purity (%)	≥ 99
Volatile Content (%)	≤ 0.5
Ash Content (%)	≤ 0.1
Absorption Peak (nm)	398、470

Applications

Can be used in UV coatings; UV inks; UV adhesives; photoresists; photopolymerizable plates; composites; dental fillings, etc.

Recommended Usage

Solubility (20 C, g/100g)

Solvent or monomer	Acetone	Methyl ethyl ketone	Toluene	HDDA	TMPTA
Solubility:	30	30	10	22	5

Recommended addition: 3~4%,

Users are advised to determine the optimum dosage by experiment before use.

Storage Conditions

To prevent premature polymerization due to the high reactivity of this product, keep it tightly sealed and store away from heat sources and direct sunlight. It is recommended to maintain storage temperature below 30 °C. Unused product should be promptly resealed and must not be left open. Under ventilated conditions at 25 °C, the product has a safe storage period of 6 months. Available packaging: 20 kg per bag.

Tips: Lencolo 5021 has good absorption of visible light, has a bleaching effect, and is used in PCB inks and dental fillings.

Note: Technical data represents typical values only. In view of the differences in formulas, production process, conditions, all the above statements must be adjusted according to the actual situation, our company does not make any promises. Our company reserves the right to reform its products without prior notice of any changes.