

PowerCure™ 784 Photoinitiator

Introduction

PowerCure™ 784 is a very reactive, cationic type solid photoinitiator. It is very sensitive to light with photobleaching effect, and it can be used in light-solidification system initiated by visible light. It is mainly used in high-tech and high value-added fields, such as argon laser scanning curing, holographic laser imagery.

Chemical Name

Bis(.eta.5-2,4-cyclopentadien-1-yl)bis[2,6-difluoro-3-(1H-pyrrol-1-yl)phenyl]-titanium

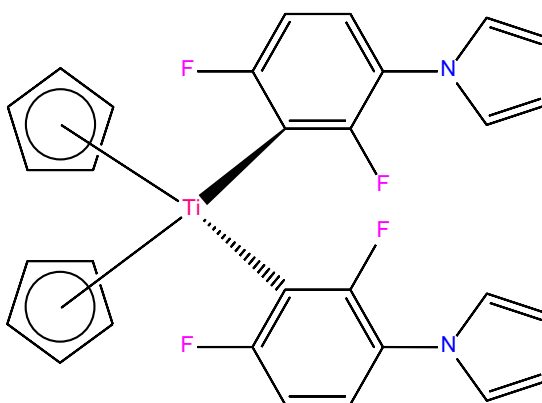
CAS Number

125051-32-3

EINECS Number

412-000-1

Chemical Structure



Chemical Formula

$C_{30}H_{22}F_4N_2Ti$

Molecular Weight

534.4

Physical Properties

Appearance	Yellow to orange powder
Melting point (°C)	160-170
Loss on drying (%)	Max.0.5
Ash (%)	Max.0.1
Purity (%)	Min.99
Transmittance (10g/100ml methyl benzene)	
610nm	Min.90%

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Solubility

Solubility [20°C]	% w/w
Acetone	~30
Hexanedioldiacrylate (HDDA)	10
Methylethylketone	~30
Toluene	10
TMPTA	5
(Trimethylolpropanetriacrylate)	

Benefits & Applications

PowerCure™ 784 may be used for UV and/or visible light curable formulations based on chemically unsaturated systems after adequate testing - such as those based on a prepolymer - e.g. acrylates in combination with mono and multifunctional monomers as reactive thinners. The best curing performance of PowerCure™784 can only be achieved in the absence of oxygen.

PowerCure™ 784 can be used in photopolymers, e.g. resists, printing plates and other information storage devices such as optical layers, holograms, laser direct imaging, stereolithography due to its unique absorbance properties together with its outstanding reactivity. Curing can be performed either using UV light, visible light (blue-green part of the spectrum) or even light from suitable laser devices, e.g. Ar-Laser (488nm) or FD-Nd /YAG-Laser (532nm). Best performance is obtained if oxygen is excluded from the resin system during curing.

In addition, PowerCure™ 784 can also be used in coatings, inks or adhesives.

The amount of PowerCure™ 784 required for optimum performance should be determined in trials covering a concentration range. Recommended dosage is 0.1-0.5% w/w.

Handling & Storage

In accordance with good industrial practice, handle with care and avoid unnecessary personal contact. Avoid continuous or repetitive breathing of dust. Use only with adequate ventilation. Protect skin. Avoid dust formation and ignition sources.

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This product may be stored up to one year in a sealed container. Containers should be stored in a cool, dry area. Extended storage at elevated temperatures or exposure to direct heat or sunlight could reduce product life. Keep containers sealed when not in use.

For more detailed information please refer to the material safety data sheet.

Packing

PowerCure™ 784 is supplied in a 25kg Fiber Drum.

Note

All information in the leaflet is based on our present knowledge and experience. We reserve the right to make any changes according to technological progress or further developments. Performance of the product described herein should be verified by testing.

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