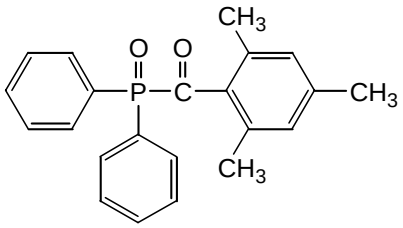
Photoinitiator for UV coatings **PHOTOINITIATOR**

1. General

Since Chivacure® TPO has a minor λ_{max} located in 382 nm, it can be used for pigmented systems without sacrificing activity. Also due to its unprecedented speed and non-yellowing properties, it is the best recommendation for thick film and white pigmented coating.

2. Properties

Structure :



CAS Name	:	2,4,6-Trimethylbenzoyldiphenylphosphine oxide
CAS No.	:	75980-60-8
Molecular Formula	:	$C_{22}H_{21}O_2P$
Molecular Weight	:	348.37

3. Physical Data

Appearance	:	Yellow crystalline powder
Specific gravity	:	1.136 g/cm^3 @20 °C
Melting point	:	87 - 93 °C
Vapor pressure	:	< 0.01 Pa @20 °C

4. Solubility

(g in 100 ml solvent, at 20 °C)

Acetone	:	ca. 50
Butyl acetate	:	ca. 50
Dichlomethane	:	ca. 60
MEK	:	ca. 40
Styrene	:	ca. 30
TMPTA	:	ca. 30
Water	:	Nil

5. Specification

Appearance	:	Yellow crystalline powder
Assay (HPLC)	:	98% min.
Melting point	:	87 - 94 °C
Acid value (mg KOH/g)	:	1 max.
Clarity of solution	:	Clear

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6. Application

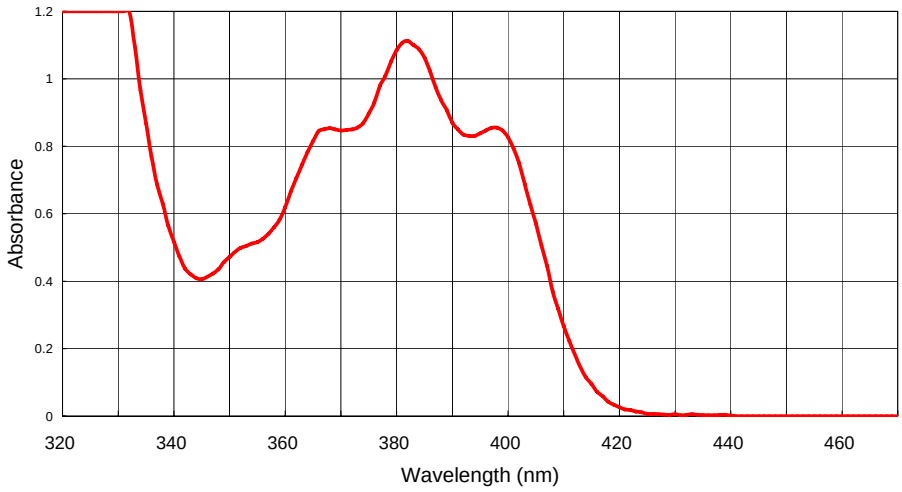
Basically, a percentage of 1 – 3% of Chivacure® TPO is effective for lacquer preparation. If the resin is made of polyester, there is no need for coinitiators. However, due to its sensitivity toward oxygen inhibition, additional coinitiators such as Chivacure® 184 or 173 is highly recommended for pigmented acrylic finishes. If the yellowing is not concerned, amine synergist such as Chivacure® EPD or 115 is also benefic to the throughcure.

Owing to its absorption of light in the long wave UV region, Chivacure® TPO and lacquers produced from it are daylight-sensitive. Therefore, light with wavelength less than 500 nm must be excluded during storage and processing.

The shelf life of Chivacure® TPO finishes must be carefully checked due to the premature curing.

7. UV Spectrum

Spectrum of Chivacure TPO



8. Storage

Must be stored in closed containers in dry and dark conditions.

9. Packaging

20 kg fiber drum