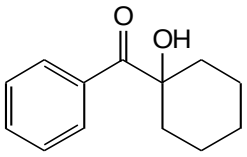
Photoinitiator for UV Radiation Curing Systems **PHOTOINITIATOR**

1. General

Chivacure® 184 is the best choice for non-yellowing application. It is an alpha cleavage type photoinitiator, which combines the characteristics of high photospeed and exceptional storage life. The non-yellowing and low-irritating properties make it an ideal choice for clear coatings on paper, flooring, metal, plastics, and wood.

2. Properties

Structure :



Chemical name	:	1-Hydroxy cyclohexyl phenyl ketone
CAS No.	:	947-19-3
EINECS No.	:	213-426-9
Molecular formula	:	$C_{13}H_{16}O_2$
Molecular weight	:	204.27

3. Physical Data

Appearance	:	White to off-white crystalline powder
Odor	:	Very faint
Melting point	:	47 - 50 °C
Boiling point	:	175 °C @15 mmHg
Specific gravity	:	1.1 - 1.2 @20 °C

4. Solubility

(g in 100 ml solvent @20 °C)

Acetone	:	> 100
Toluene	:	> 100
Methyl acrylate	:	> 100
Ethyl acetate	:	> 100
Ethanol	:	> 100
HDDA	:	> 100
N-Vinylpyrrolidone	:	> 100
TMPTA	:	> 50
2-Ethyl acrylate	:	> 50
Water	:	< 0.1

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5. Specification

Appearance	:	White to off-white crystalline powder
Assay	:	99% min.
Melting point	:	46 - 50 °C
Volatiles	:	0.5% max.
Transmittance	:	97% min. @425 nm
		98% min. @500 nm

6. Application

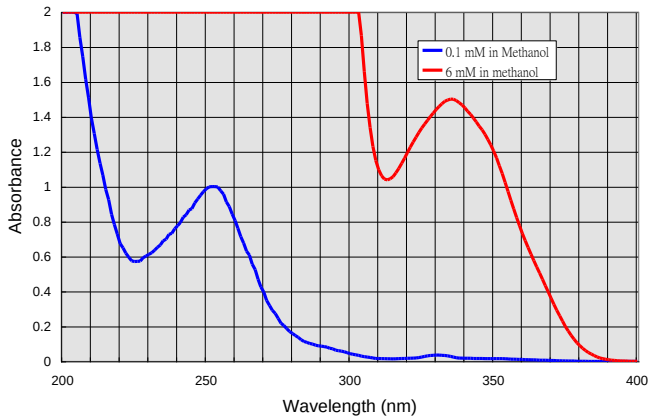
Chivacure® 184, when irradiating with UV light, undergoes an intramolecular homolytic breakage to generate a pair of free radicals to initiate the polymerization of UV curable systems. It does not require hydrogen donor to initiate its radicals. However its radicals are very sensitive to oxygen in the air.

Chivacure® 184 is strongly recommended when non-yellowing properties are crucial. Results obtained from outdoor exposure study show that it gives better long-term non-yellowing performance than other initiators. Furthermore, It exhibits lower sensitivity to air inhibition than Chivacure® 173 during curing.

The usage rates of Chivacure® 184 vary according to the composition of the system, source of light, line speed, and film thickness but usually lie between 0.5% to 5% w/w. Chivacure® 184 can be used for printing ink, overprint varnishes and wood lacquers, adhesive, and photoresist dry film.

7. UV Spectrum

UV SPECTRUM OF CHIVACURE 184



8. Storage

Must be stored in closed containers in dark dry conditions.

9. Packaging

20 kg net/carton box

10. HS Code

2914 4090