Greener, safer,
and
more effective
Chemistry

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Chivacure® P-4075

Introduction

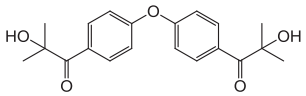
Chivacure® P-4075 (P-4075) is specially designed for low migration and food packaging printing inks. It is a liquid photoinitiator blend based on oligomeric hydroxyketone and phosphine oxide photoinitiators. With the optimized proprietary ratio, P-4075 is characterized by:

- Very low color contribution
- Excellent surface cure
- Broad wavelength & photoactivity
- Synergistic with photosensitizers, e.g. ITXs.

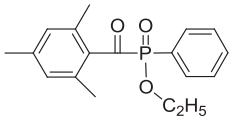
The wide range of UV absorbance wavelength allows for good surface and depth cure balance in both mercury lamps and LED UV curing systems. P-4075 blend is manufactured by Chitec' s unique and environmentally friendly process that allows for excellent initial color formation while not having odor after curing. In printing ink applications, Chivacure® P-4075 is compliant for food packaging regulations.

Chemical Information

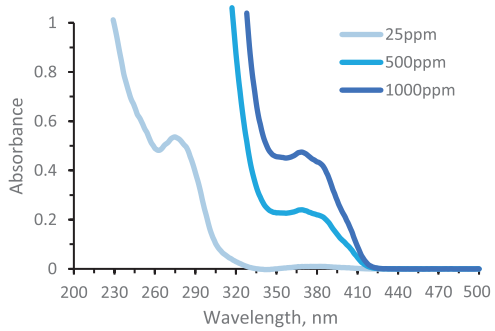
a. CAS No. 71868-15-0



b. CAS No. 84434-11-7



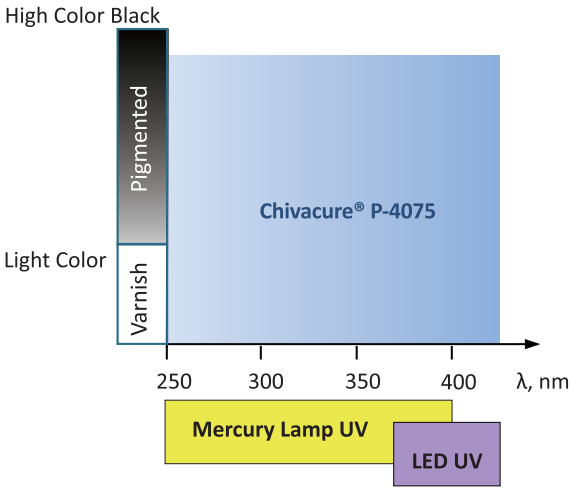
UV Spectrum



Physical Data

Appearance	:	Yellow liquid
Odor	:	Faint
Color (Gardner)	:	4.5
Assay (HPLC)	:	99 % min.
Volatiles	:	0.5 % max.
Clarity	:	Clear

The Application Map



Recommended Applications

- ✓ Clears, white and pigmented ink system
- ✓ Mercury lamp and LED UV system
- ✓ Food packaging printing ink
- ✓ Low viscosity ink system
- ✓ Low curing energy system

Application Data

■ **Mercury Lamp**

Energy Increase

		UV Dosage, mj/cm²	PI-907	P-4075	TPOL/819= 91/9
Condition A	UVA	52	○	△~ ○	X
	UVB	62			
	UVC	11			
Condition B	UVA	87	○	○	X ~△
	UVB	106			
	UVC	23			

Test Conditions:
- Test PI/ 2-ITX= 6%/ 1%
- Carbon black= 5%
- Dry Film Thickness= 9um

○ = Full Care
△ = Surface Tacky
X = Wet Film

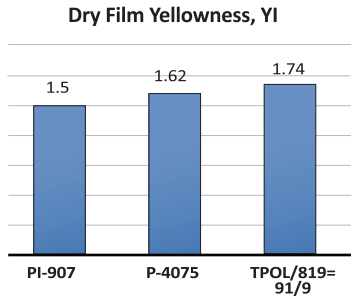
■ **LED UV**

Energy Increase

LED UV	Photospeed, M/min	PI-907	P-4075	TPOL/819= 91/9
395 4W	35M			
	30M			
	25M			
	20M			
	15M			
	10M			

Test Conditions:
- Test PI/ 2-ITX= 6%/ 1%
- Carbon black= 5%
- Dry Film Thickness= 9um
- Height of LED UV= 1cm

■ **Yellowness**



Test Conditions:
- LED 365nm
- Test PI= 4%
- Dry Film Thickness = 9um