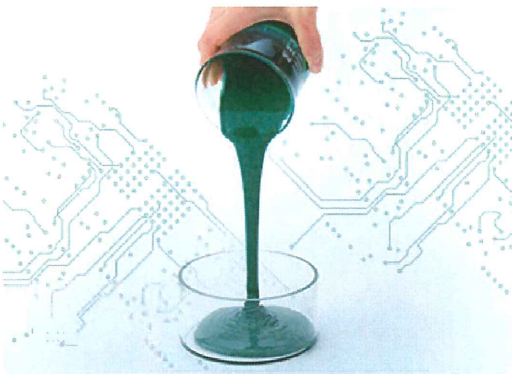


# NPI-20400

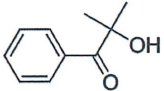
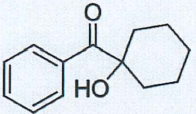
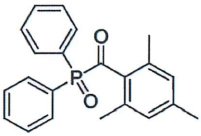
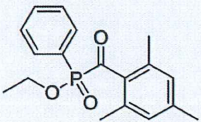
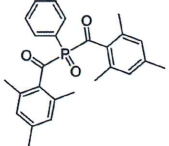
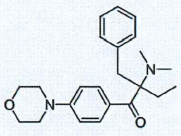
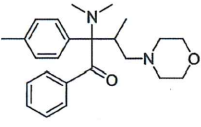
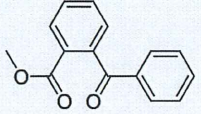
Product	Peak Absorption	Feature	Application
NPI-20400	313nm	No reproductive toxicity Odorless, low migration High solubility Heat resist (200 C)	Offset printing ink, flexo printing ink, ink-jet printing ink, solder resist ink, paint, varnish (slight yellowing), UVLED curing formulation and photo resist

## Chemical Regulations

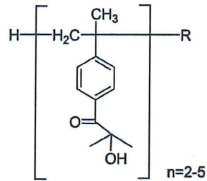
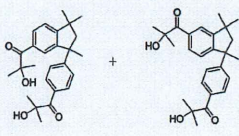
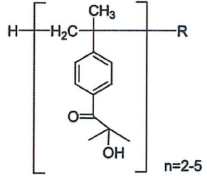
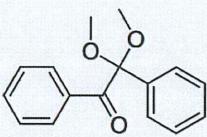
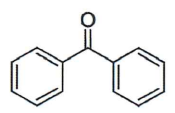
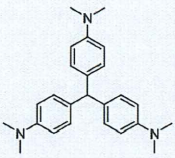
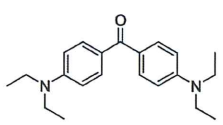
Country	Regulation	Amount	Period
Europe	REACH	10-100 t	Expected application in 2019
China Mainland	General Notification Level 2		
Japan	Chemical Substances Control Act	≥10 t	



# Free Radical Photoinitiator

Product	Chemical Structure	Cas No.	Peak Absorption	Application
1173		7473-98-5	244 nm, 278 nm, 322 nm	UV curing system of unsaturated polyesters and multiple functional monomers, combination with other photoinitiators, 1-4% of additive amount is recommended
184		947-19-3	244 nm, 280 nm, 330 nm	Overprint varnish, plastic paint, wooden varnish, adhesives, lithographic printing ink, screen printing ink, flexographic ink, electronic products
TPO		75980-60-8	273 nm, 370 nm	Screen printing ink, lithographic printing ink, flexographic ink, wooden coating
TPO-L		84434-11-7	273 nm, 370 nm	Printing ink and adhesives of wood, metal, plastic, paper and fiber
819		162881-26-7	295 nm, 370 nm	UV curing coating for plastics
369		119313-12-1	233 nm, 324 nm (in methanol)	Combined with photoinitiators such as 184 or 651, 907, ITX in UV curing inks and coatings
379		119344-86-4	233 nm, 320 nm (in methanol)	Exclusive use or in combination with photoinitiators such as IRGACURE 184 or IRGACURE 651 in UV curing inks and varnishes for paper, metal and plastic
OMBB		606-28-0	253 nm	Odorless and non-toxic packaging for paper or food package, curing efficiency increased when combined with TPO

# Free Radical Photoinitiator

Product	Chemical Structure	Cas No.	Peak Absorption	Application
TR-PPI-101		Closed Information	257 nm	Varnishes and coatings, inks, printing boards, adhesives; in combination reactive diluents or other liquid photoinitiators in UV water-based systems
TR-PPI-ONE		Closed Information	258 nm	Varnishes and coatings, inks, printing boards, adhesives; in combination reactive diluents or other liquid photoinitiators in UV water-based systems
TR-PPI-102		N/A	257 nm	Varnishes and coatings, inks, printing boards, adhesives; in combination reactive diluents or other liquid photoinitiators in UV water-based systems
BDK		24650-42-8	250 nm, 340 nm	UV curing varnish and ink, 2-5% of additive amount is recommended
BP		119-61-9	210 nm, 255 nm	UV curing varnish and ink
LCV		603-48-5	260 nm	Chromogenic agent in dry film formulation
EMK		90-93-7	248 nm, 374 nm	UV curing system of acrylic acid monomers and oligomers

# Cationic Photoinitiator



Product	Chemical Structure	Feature	Application
Sulfonium salt		Thermal stability with maximum absorption wavelength as 290 nm; usually in combination with ester solvents such as propylene carbonate	Ink, adhesives and photoresist
Iodonium salt		High photoreactivity and quantum efficiency in superacid production; thermal stability with the short maximum absorption wavelength (generally under 300 nm)	Ink, adhesives and photoresist
Sulphonic acid ester		High photoreactivity and thermal stability; the maximum absorption wavelength as 365nm or more	Chemically amplified photoresist