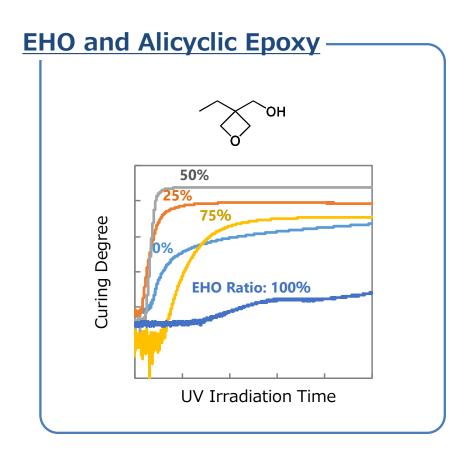
Improvement of Reactivity in UV Curing Epoxy **UBE**

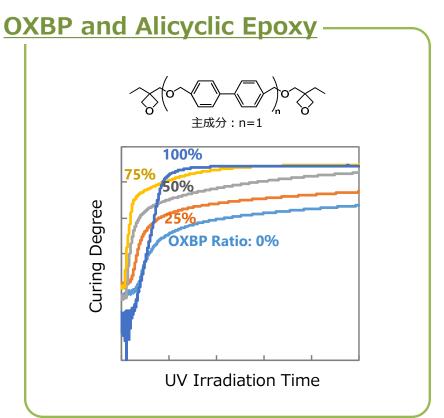


•Ver.: U2212-1 2022年12月

Reactivity can be improved in UV curing epoxy resin by addition of oxetanes.

It is expected to shorten the cycle time and improve the properties by improving the degree of cure.





Base Resin : Alicyclic Epoxy

Photo Acid Generator: CPI-100P(San-Apro Ltd.) Curing Conditions: High Pressure Mercury Lamp

Improvement of Properties in UV Curing Epoxy UBE

UV cationic curing resin has low reactivity and the properties of the cured resin can be low. The addition of oxetane is expected to improve reactivity and properties in UV curing epoxy resin.

Resin Composition	Oxetane	0%	ОН ЕНО 50%	НВОХ 50%	主成分: n=1 OXBP 50%	OXMA 50%
	Alicyclic Epoxy	100%	50%	50%	50%	50%
	Viscosity mPa·s	221	38	49	617	17
Physical Properties of Cured Resin	Gel Fraction	75%	~100%	~100%	~100%	~100%
	Modulus	1.3 GPa	2.8 GPa	2.0 GPa	2.5 GPa	3.2 GPa
	5% Weight Loss Temperature	227 ℃	270 ℃	292 ℃	311 ℃	274 ℃
	WVTR g/m2·Day*	74	12	31	17	25
	Tg	72 ℃	77 ℃	61 ℃	92 ℃	95 ℃
	Relative Permittivity (1MHz)	3.46	3.48	3.66	3.50	3.64
	Dielectric Loss Tangent(1MHz)	0.0366	0.0488	0.0334	0.0268	0.0525

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Photo Acid Generator : CPI-100P(San-Apro Ltd.)

Curing Conditions: High Pressure Mercury Lamp 16,000mJ/cm2

※Conditions: 40 ℃、90%RH

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