

## OLESTER™ and U-VAN™ Materials for heat/UV curing systems

In the polymer materials, the replacement of fossil-based products with 'Biomass-based' products is strongly required. OLESTER™ and U-VAN™ are sustainable biomass-based coating materials for mobile phones, computers, automotive and more.

### Grades and Characteristics

Curing systems		Grade	Biomass degree	Characteristics
2K-PU	Main polymer	OLESTER™ Q703	39%	Substrate versatility
	Curing agent	STABIO™ D-370N*1	70%	
Polyol*2-Melamine	Curing agent	U-VAN™ 703	31%	Low temp. curing
UV	Main component	OLESTER™ XRA2322	31%	High abrasion resistance

\*1 Isocyanate curing agent. There is another brochure. \*2 For example, OLESTER™ Q177 (OHV: 104mgKOH/g, Tg: 63°C)

### Applications

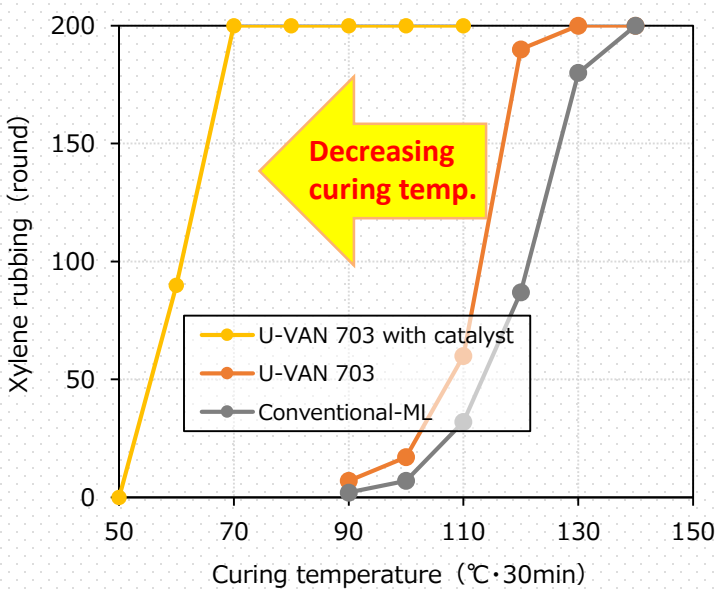


### Abrasion resistance & Chemical resistance of OLESTER™

		OLESTER™ XRA2322	OLESTER™ Q713 +Takenate™ D-370N
Curing system		UV curing*1	Heat Curing*2
Abrasion resistance	Haze after abrasion test (SW#0000 500g × 50 times)	1.2%	> 5%
Chemical resistance	Spot test r.t., 48 hr	Lactic acid	No change
		Coppertone®4	No change
		Castor oil	No change
	Spot test NEUTROGENA® SPF45	r.t. × 48 hr	No change
55°C × 5 hr		No change	No change
Adhesion	Cross-cut test	PC, ABS/PC	100/100
		40%GF/PP, 50%GF/Nylon, 6-Nylon, 6,6-Nylon, PBT, SMC, BMC	0/100

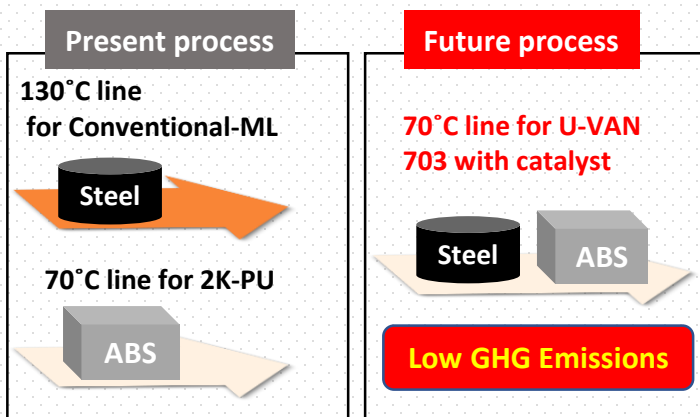
\*1. Irgacure1173 3wt%(vs solid) was added, UV 600mj/cm<sup>2</sup> \*2. OH/NCO ratio = 1.5, 80°C × 30mins.

## Low temperature curing of U-VAN™



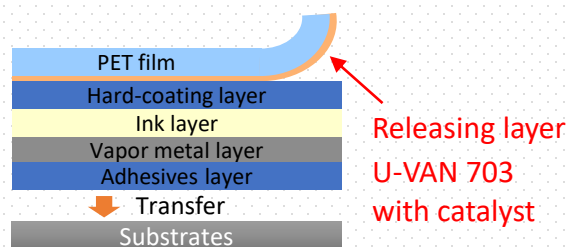
### Application for plastics substrate

- Curing agent for automobile body and resin parts integrally



- U-VAN™ 703 is lower curing agent compared with other melamine resin.
- Combination with acid catalyst capable to significantly decrease curing temp. (ca 70°C).

- Main agent for releasing film



## Grades and Characteristics

Grade	OLESTER™ XRA2322	OLESTER™ Q713	U-VAN™ 703
Appearance	Pale yellow, Transparent	Pale yellow, Transparent	Transparent
Solid content (%)	50 – 54	50 – 53	58 – 62
Viscosity (mPa·s)	2000 – 4000	800 – 3000	1500 – 5000

## FAQ

### What is the conditions for coating and curing?

#### OLESTER™ XRA2322

OLESTER™XRA2322/Irgacure1173/PGM =10/0.16/26.4

- Dry thickness: 15 μm
- Dry temp. and time: 60°C × 2 min
- Total UV intensity: 400 mJ/cm<sup>2</sup>

#### OLESTER™ Q713

OLESTER™Q713/Stabio™ D370N, NCO/OH=1.5  
Catalyst : Neostane U100 (50ppm/resin·solid)

- Dry thickness: 12 μm
- Curing temp. and time: 70 °C×30 min

#### U-VAN™ 703

OLESTER™ Q177/ U-VAN™ 703/ catalyst = 70/30/1.5 (Solid)  
(Q177 : Acrylic resin, OHV = 104mgKOH/g, Tg = 63°C)

- Dry thickness: 10-20 μm
- Curing temp. and time: more than 70 °C x 30min

## -Contact detail-

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