

Photo-Curable Adhesive

ARONIX® UVX-6420

Features

- ① Solvent-free and low viscosity
- ② Good adhesion to various substrates
- ③ Useful for optical applications because of colorless transparency
- ④ Curable even by UV irradiation through UV absorbing substrates
- ⑤ Low Water absorption due to the hydrophobicity

Product Name	Viscosity	180° Peel Strength(N/inch) ¹⁾						Tg (°C)
	mPa·s (25°C)	PET	PMMA	PC	TAC	Poly-imide	Glass	
UVX-6420	163	16	22	22	22	19	14	18

***Water Absorption of Cured Resin : 1.7%**

Water absorption = $(W_2 - W_1) / W_1 \times 100(\%)$

W_1 : initial weight after drying for 24h at 50°C, W_2 : weight after soaking in water for 24h at 23°C

1) Sample structure : PET(Adhesive Type)/**UV Curable Adhesives(10-15μm)**/ Various Substrates

PET(Adhesive Type): COSOMOSHINE® A4300 (TOYOBO, 50 μm)

Various Substrates

PET	: LUMIRROR® T-60	(TORAY, 50 μm, Non-Adhesive Type)
PMMA	: ACRYLITE® #001	(MITSUBISHI RAYON, 1mm)
PC	: IUPILON® NF-2000	(MITSUBISHI ENGINEERING-PLASTICS, 1mm)
TAC	: FUJITAC® TD 80UL	(FUJIFILM, 80 μm)
Polyimide	: KAPTON® 100EN	(DU PONT-TORAY, 25 μm)
Glass	: FLOAT GLASS	(NIPPON SHEET GLASS, 3mm)

Photo Curing Conditions: Metal Halide, 160W/cm, 1,000mJ/cm²(UV-A)

180° Peel Strength: 23°C, 200mm/min.



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Photo-Curable Adhesive

ARONIX® UVX-6812, 6813

Features

- ① Solvent-free and low viscosity
 - ② Good adhesion to various substrates
 - ③ Less yellowing due to UV or heat
 - ④ Less polymerization heat generation (UVX-6813)
- *Yellowing resistance due to heat and UV is at the same level as UVX-5457, 5458.

Product Name	Viscosity	Peel Strength(N/inch)						Tg (°C)
		180 deg. Peel ¹⁾	T-Peel ²⁾					
	mPa · s (25°C)	Glass	PMMA	PC	TAC	PET	COP	
						Surface treatment		
UVX-6812	400-800	25	14	13	10	16	13	6
UVX-6813	450-850	28	12	7	8	15	9	9

*Photo Curing Conditions : Metal Halide, 240W/cm, 1,200mJ/cm²(UV-A)

*Surface treatment : Corona discharge treatment

1)Sample structure : PET(Surface treatment) /**UV Curable Adhesives(10μm)**/ Glass
180 deg. Peel Strength : 23°C, 200mm/min.

2)Sample structure : Various Substrates /**UV Curable Adhesives(10μm)**/ Various Substrates
T-Peel Strength : 23°C, 200mm/min.



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Photo-Curable Adhesive

ARONIX[®] UVX-5457, 5458

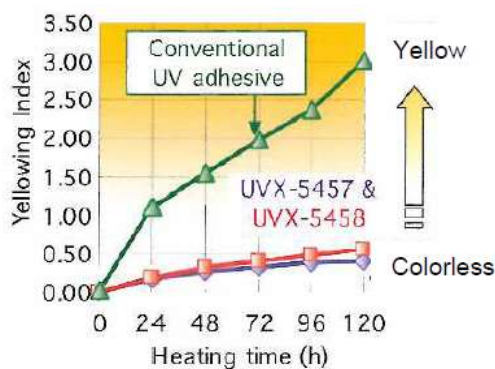
Features

- ① Solvent-free and low viscosity
- ② Good adhesion to various substrates
- ③ Less yellowing due to UV or heat
- ④ Less polymerization heat generation (UVX-5458)

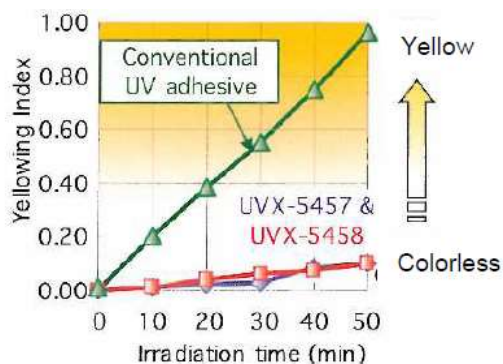
Product Name	Viscosity	T-Peel Strength(N/inch) ¹⁾						Tg (°C)
	mPa·s (25°C)	PET	PMMA	PC	TAC	OPP	COP	
						Surface treatment		
UVX-5457	400-800	8	22	18	15	6	5	26
UVX-5458	400-800	10	16	9	18	5	6	33

1) Sample structure : Various Substrates /UV Curable Adhesives(10μm)/ Various Substrates
 Photo Curing Conditions : Metal Halide, 120W/cm, 1,200mJ/cm²(UV-A)
 T-Peel Strength : 23°C, 200mm/min.
 Surface treatment : Corona discharge treatment

Heat
resistance test
(120°C)



UV resistance test



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UV Conformal Coating

ARONIX® UVX-6754

Features

- ① This is a Non-solvent UV curable conformal coating with good FPC adhesion.
- ② This is suitable for protecting electrode terminals and electronic circuit boards.
- ③ Since the transparency of the resin is high, you can check the corrosion state of the electrode through the resin.

		UVX-6754
Viscosity (77 deg. F)		2,500~8,000 mPa·s
Tg (1 Hz)		75.2 deg. F
Adhesive strength	Polyimide *180 deg. Peel Strength	13.2 N/in.
	Glass *Bonding Strength	1,890 N/sq. in.
Water absorption (104 deg. F, 24hours)		1.8%
Moisture permeability (104 deg. F, 90%RH, Thickness=2mm)		1.25 g/sq. ft. ·24hours
Electric resistance during moisture test (104 deg. F, 80%RH, 1,000 hours, 80V, L/S=50 μm(Ag)/50 μm(Glass))		OK

Polyimide : KAPTON® 100EN (DU PONT-TORAY, 25μm)
 Glass : FLOAT GLASS (NIPPON SHEET GLASS, 3mm)
 Photo Curing Conditions : Metal Halide, UV exposure dose = 1J/cm²(UV-A)
 180 deg. Peel Strength : 1.97 inch/min., 73.4deg. F, 50%RH
 Bonding Strength : 1.97 inch/min., r.t.

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Hard coating agent

ARONIX[®] UVX-6524

Features

- Low viscosity and hard coat resistance than conventional non-solvent hard coating agent.

Example of applications

- Nanoimprint, UV curing hard coat for spray/inkjet printing

Grade		UVX-6524
Features		Low viscosity
Viscosity (mPa·s, 25°C)		40
Refractive index (_{n_D25})	Before curing	1.484
	After curing	1.524
Pencil Hardness JIS K5600, 750gf	PET	3H
	PC	F
	TAC	3H
	PMMA	3H
Adhesion JIS K5600	PET	Good
	PC	Good
	TAC	Good
	PMMA	Good
Scratch Resistance (Steel Wool : #0000, 500gf × 100cycles)		OK

*Release film / UVX(t=10μm) / Substrate film

*Metal-halide lamp, 250mW/cm², 1,000mJ/cm² (at 365nm)

*Substrate PET: COSMOSHINE[®] A4300 (TOYOBO, 100μm), PC : TEIJIN PANLITE[®] PC-2151(125μm)
TAC: FUJITAC[®] TD80UL (80μm), PMMA: KURARAY KURARITY[®] HI-50-75 (75μm)



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