www.uv-shikoh.com

SHIKOH™

Ultraviolet Curable Resin

NIPPON GOHSEI

The Nippon Synthetic Chemical Industry Co., Ltd.

■ Japan

NIPPON GOHSEI (Tokyo Office – Specialty Polymers Department)
Shibaura Renasite Tower, 9-1, Shibaura 3-chome, Minato-ku, Tokyo 108-0023, Japan
Tel: +81-3-6436-2815 Fax: +81-3-6436-2820
E-mail: #ngc-spp@mail.nichigo.co.jp

■ China

NICHIGO SHANGHAI Co., Ltd. (日之高（上海）商貿有限公司)
Room904 The Center, No.989, Chang Le Road, Shanghai 200031,China
Tel: +86-21-5407-6333 Fax: +86-21-5407-6038
E-mail: #ngc-china8@mail.nichigo.co.jp

■ Europe, Middle East, and Africa

NIPPON GOHSEI Europe GmbH
Merowingerplatz 1a, D-40225, Düsseldorf, Germany
Tel: +49-211-385488-24 Fax: +49-211-385488-29
E-mail: eurosales@nippon-gohsei.com

■ Southeast Asia

NIPPON GOHSEI (THAILAND) CO., LTD.
Regent House Bldg., 183 Rajadamri Road, Lumpini Pathumwan, Bangkok 10330, Thailand
Tel: +66-2-251-1569 Fax: +66-2-255-2824
E-mail: #ngc-se-asia9@mail.nichigo.co.jp

■ Americas

NIPPON GOHSEI (USA) Co., Ltd.
3930 Ventura Drive, Suite 355, Arlington Heights, IL 60004, USA
Tel: +1-847-222-0243 (Ext.14)
E-mail: NUSinfo@nichigo-usa.com

2012.11

Solution by Chemistry

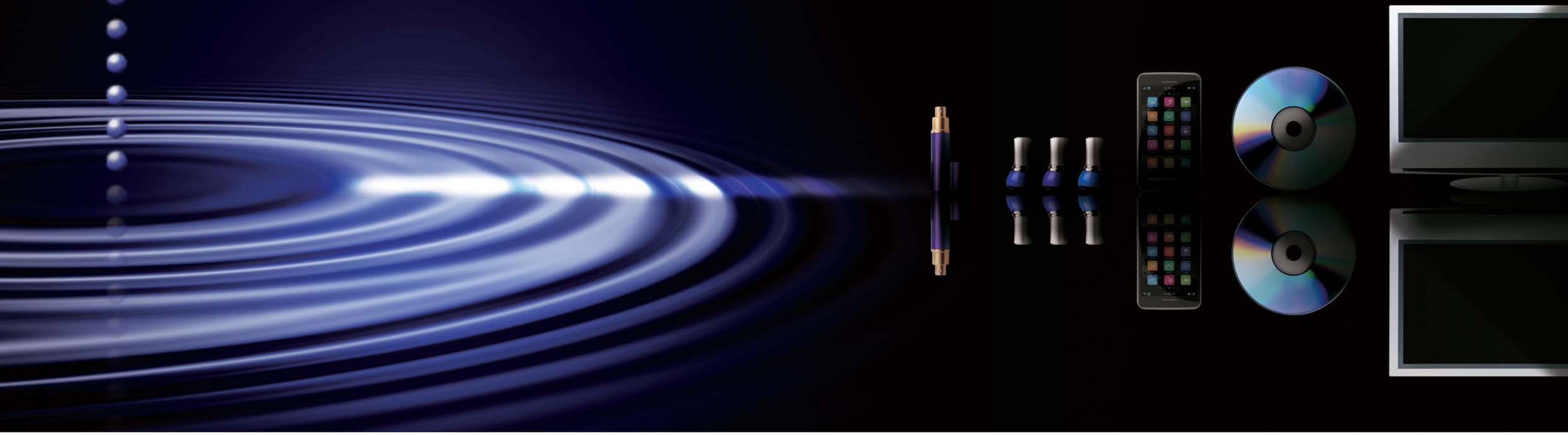
NIPPON GOHSEI

SHIKOH is the leading brand in UV curable urethane acrylate oligomer.

SHIKOH™

Ultraviolet Curable Resin

Ultraviolet curable resin is garnering widespread attention for its low-polluting, energy-saving properties and high productivity.
NIPPON GOHSEI offers a wide lineup of such resin under the SHIKOH brand name, with a special emphasis on urethane acrylate oligomer.
In addition to hard coating application,
SHIKOH is suitable for use in a wide range of applications.
NIPPON GOHSEI's SHIKOH holds the key to the future of ultraviolet curable resin.



SHIKOH is available in a wide variety of types, centered mainly on urethane acrylate.

From hard types that are scratch resistant and provide high gloss, to soft types that create a strong coating and provide excellent adhesion to various base materials, SHIKOH is available in a wide variety of types, centered mainly on those made of urethane acrylate oligomer.

By changing the structure of the resin in response to expanding applications, Nippon Gohsei delivers SHIKOH products with properties optimal to diverse needs. We work in close cooperation with our customers to constantly develop new materials toward their practical use.

Hard Type

Hardness

- 4H
- 3H
- 2H
- H
- F
- HB
- B
- 2B
- 3B
- 4B
- 5B
- 6B

- Hardness(4H) **UV-1700B** — Excellent hardness
- Hardness(3H〜4H) **UV-7640B** — Good balance of scratch resistance and shrinkage
- Hardness(3H〜4H) **UV-7605B** — Abrasion resistance, Good adhesion, Alcohol solubility
- Hardness(3H) **UV-7630B** — Crack resistance, Good Toughness
- Hardness(3H) **UV-7600B** — Good balance of hardness and shrinkage
- Hardness(3H) **UV-7620EA** — Adhesion to hard-to-adhere materials, Tack-free surface
- Hardness(2H〜3H) **UV-6300B** — Stain resistance, Crack resistance
- Hardness(2H) **UV-7650B** — Excellent flexibility
- Hardness(3H) **UV-7610B** — High molecular weight
- Hardness(F) **UV-7550B** — Weather resistance, Thermal resistance, Stain resistance

Special Functional Type

- Antifouling Type
- Self Healing Type
- Low Refractive Index Type
- Antistatic Type
- Waterborne Type
- For Hard-to-adhere Material Type

We also have special functional grades that respond to paticular market needs. For more information, please contact us.

Medium-hard Type

- Hardness(B) **UV-7510B** — Weather resistance, Water resistance, Chemical resistance, Flexibility
- Hardness(3B〜2B) **UV-6630B** — Toughness, Water resistance, Adhesion to PVC
- Hardness(2B) **UV-7000B** — Toughness, Stain resistance, Abrasion resistance
- Hardness(4B〜3B) **UV-7461TE** — Weather resistance, Flexibility

Soft, Elastic Type

Ester Type

- Hardness(6B>) **UV-3500BA** — Toughness
- Hardness(6B>) **UV-3520EA** — Toughness, High elongation
- Hardness(6B>) **UV-3200B** — Soft rubber elasticity
- Hardness(6B>) **UV-3000B** — Soft rubber elasticity

Ether Type

- Hardness(3B) **UV-6640B** — Water resistance, Weather resistance, Good adhesion to PVC & hard-to-adhere materials
- Hardness(6B>) **UV-3300B** — Flexibility, Good adhesion
- Hardness(6B>) **UV-3700B** — High molecular weight, Low modulus, Flexibility, Good adhesion

Carbonate Type

- Hardness(2B) **UV-3310B** — Weather resistance, Humidity and heat resistance, Good adhesion to polycarbonate
- Hardness(6B>) **UV-3210EA** — Soft rubber,Elasticity, Humidity and heat resistance, Good adhesion to polycarbonate

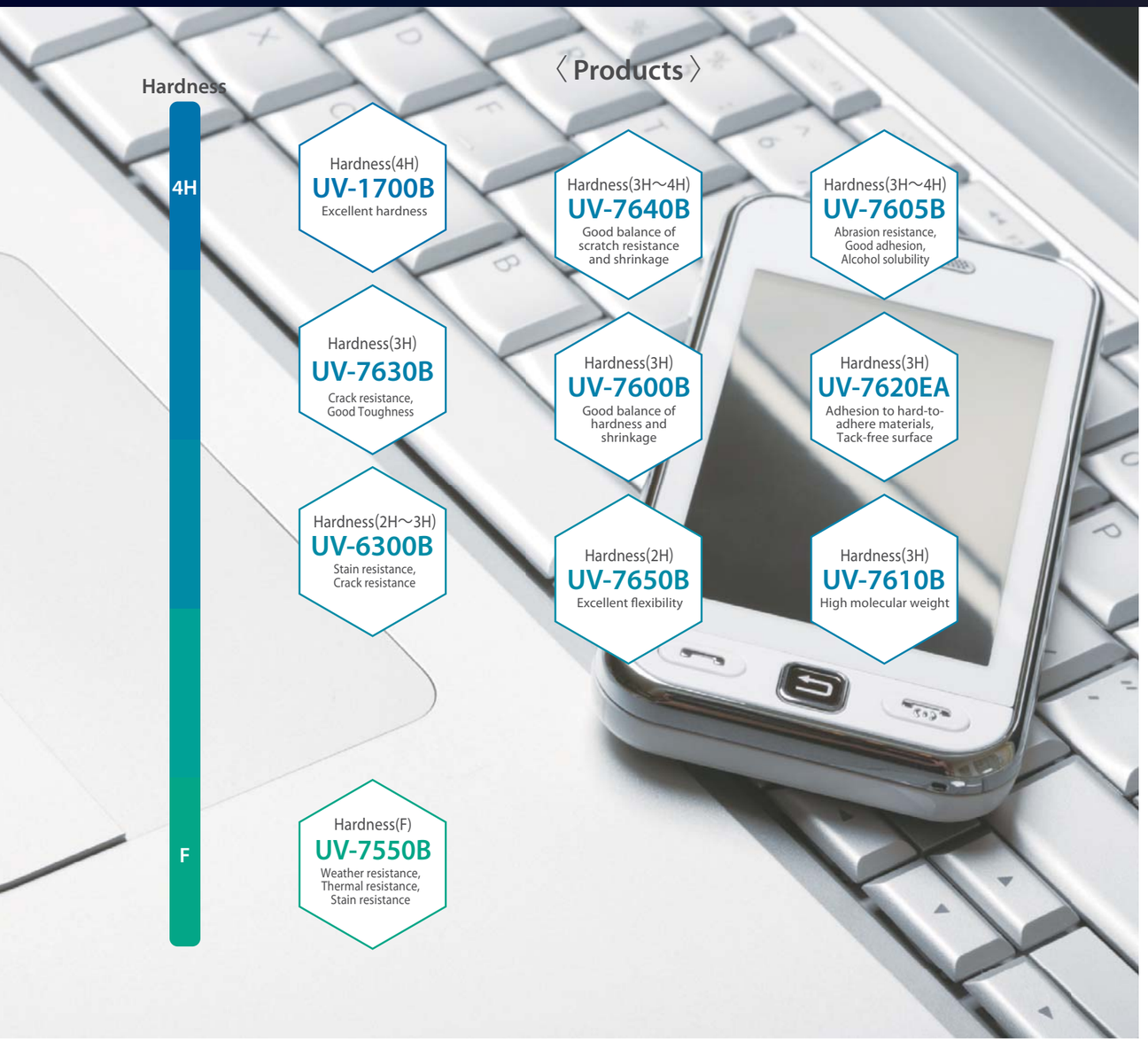
Yellowing Type

- Hardness(2B〜B) **UV-2750B** — Toughness, Low tack
- Hardness(6B>) **UV-2000B** — Soft rubber elasticity

Hard Type

Hard coatings for plastic, optical films, metalizing materials, building materials, etc.

SHIKOH™ 焼光™



UV-1700B Provides excellent UV curing performance and delivers the hardest surface of all product grades. Has relatively low viscosity.

UV-6300B Creates a high-hardness coating ideal for hard coating applications. Provides greater stain and crack resistance compared to DPHA.

UV-7550B Creates a hard coating with good weather resistance. Also provides excellent chemical, thermal, yellowing and stain resistance.

UV-7600B Provides excellent adhesion and creates a high-hardness coating on treated PET and TAC films and other types of plastic.

UV-7605B Provides excellent adhesion and creates a high-hardness coating on various plastic materials. Its low viscosity provides excellent solubility in various solvents.

UV-7610B Provides excellent adhesion and creates a high-hardness coating on various plastic materials.

UV-7620EA Ideal for creating a high-hardness coating on hard-to-adhere materials. Provides a tack-free surface before UV curing. Diluted in a solvent (contains 35% ethyl acetate).

UV-7630B Provides excellent adhesion and creates a high-hardness coating on various plastic materials. Also provides good crack resistance and good toughness.

UV-7640B Provides excellent adhesion to various plastic materials. Also provides good curability, low shrinkage, high hardness, and excellent abrasion resistance.

UV-7650B Provides good flexibility and excellent adhesion to plastic materials and treated PET and TAC films.

Product	Resin properties			Properties after UV curing							Characteristics & Applications
	Viscosity (mPa・s/60˚C)	Molecular weight (Mw)	Oligomer functionality	Pencil hardness (PET)	Shrinkage ratio (%)	Adhesion to plastic*					
						PC	ABS	PMMA	Treated PET	TAC	
UV-1700B	1400〜2000	2000	10	4H	9.0	◎	◎	◎	◎	◎	Excellent hardness Hard coating on plastic
UV-6300B	2000〜4000	3700	7	2H〜3H	7.3	◎	◎	○	◎	◎	Stain resistance, Crack resistance Hard coating on optical films
UV-7550B	10000〜15000	2400	3	F	3.8	△	○	○	◎	△	Weather resistance, Thermal resistance,Stain resistance Building materials
UV-7600B	2000〜4000	1400	6	3H	6.3	◎	◎	○	◎	◎	High hardness, Low shrinkage Hard coating on optical films
UV-7605B	800〜1400	1100	6	3H〜4H	7.7	◎	◎	○	◎	◎	Abrasion resistance, Alcohol solubility Hard coating on optical films Hard coating on plastic
UV-7610B	7000〜27000	11000	9	3H	8.4	◎	◎	○	◎	○	High molecular weight Hard coating on metalizing materials Hard coating on optical films
UV-7620EA	70〜270 (20˚C)	4100	9	3H	–	◎	◎	○	◎	◎	Adhesion to hard-to-adhere materials Tack-free surface Diluted in 35% ethyl acetate
UV-7630B	3000〜7000	2200	6	3H	6.4	◎	◎	○	◎	○	Crack resistance, Good toughness, Good balance of hardness and flexibility
UV-7640B	2000〜5000	1500	6〜7	3H〜4H	6.6	◎	◎	○	◎	◎	High hardness, Low shrinkage, Abrasion resistance Hard coating on optical films
UV-7650B	3000〜10000	2300	4〜5	2H	5.3	◎	◎	○	◎	◎	Excellent flexibility Hard coating on plastic

* ◎: Excellent adhesion ○: Good adhesion according to formulation △: Poor adhesion

Medium-hard Type

Ink applications, flexible coating on plastic, weather-resistant coating on plastic, base and middle coating on building materials, etc.

SHIKOH™ 焕光™

Hardness

F

4B

〈 Products 〉

Product	Resin properties			Properties after UV curing						Characteristics & Applications
	Viscosity (mPa･s/60˚C)	Molecular weight (Mw)	Oligomer functionality	Tg (˚C)	Pencil hardness (PET)	Shrinkage ratio (%)	Mechanical properties			
							Young's modulus (N/mm²)	Tensile strength (N/mm²)	Tensile elongation (%)	
UV-6630B	8000 ≀ 17000	3000	2	38	3B～2B	4～5	600	23	12	Toughness, Water resistance, Adhesion to PVC PVC flooring applications
UV-7000B	15000 ≀ 25000	3500	2～3	52	2B	4～5	400	30	20	Toughness, Stain resistance, Abrasion resistance Base and middle coating on building materials Offset/screen ink applications
UV-7510B	800 ≀ 1800	3500	3	17	B	4～5	80	7	20	Weather resistance, Water resistance, Flexibility, Resistance to marker pens Building materials
UV-7461TE	45000 ≀ 85000 (20˚C)	4300	2～3	30	4B～3B	4～5	600	23	12	Weather resistance Screen ink applications Diluted in 20% acrylic ester

UV-6630B Tough, medium-hard type with good weather resistance. Creates a tough, UV cured coating with good flexibility. Provides excellent adhesion to soft PVC and excellent chemical resistance.

UV-7000B A representative grade of all medium-hard types, with good weather resistance. Creates an tough UV cured coating that is resistant to stain and abrasion.

UV-7510B Provides relatively low viscosity, excellent weather resistance and good UV curability. Creates a flexible UV cured coating that is resistant to marker pens.

UV-7461TE Creates a UV cured coating with high flexibility, and provides excellent tearing, excellent weather resistance and crack resistance. Contains reactive diluent.

Soft, Elastic Type

Adhesives for electronic device, glass and metals, undercoating for metalizing materials and building materials, etc.

SHIKOH™ 焼光™

〈 Products 〉

Hardness

B

6B

Ester Type

Hardness(6B＞)
UV-3500BA
Toughness

Hardness(6B＞)
UV-3520EA
Toughness,
High elongation

Hardness(6B＞)
UV-3200B
Soft rubber elasticity

Hardness(6B＞)
UV-3000B
Soft rubber elasticity

Ether Type

Hardness(3B)
UV-6640B
Water resistance,
Weather resistance,
Good adhesion to PVC & hard-to-adhere materials

Hardness(6B＞)
UV-3300B
Flexibility,
Good adhesion

Hardness(6B＞)
UV-3700B
High molecular weight,
Low modulus,
Flexibility,
Good adhesion

Carbonate Type

Hardness(2B)
UV-3310B
Weather resistance,
Humidity and heat resistance,
Good adhesion
to polycarbonate

Hardness(6B＞)
UV-3210EA
Soft rubber,Elasticity,
Humidity and heat resistance,
Good adhesion to polycarbonate

Yellowing Type

Hardness(2B～B)
UV-2750B
Toughness
Low tack

Hardness(6B＞)
UV-2000B
Soft rubber elasticity

UV-2000B Creates an extremely soft coating with rubber elasticity. Ideal as a sealant for electronic materials, as UV ink, and for coating applications.

UV-2750B Provides excellent hardness and compatibility with acrylates. Creates a tack-free coating that is resistance to nail scratches.

UV-3000B Creates an extremely soft coating with rubber elasticity and high elongation. Also provides excellent properties at low temperatures, and is ideal as an adhesive or an undercoating for metalizing materials.

UV-3200B Provides similar properties to UV-3000B but with improved surface curability. Creates a soft coating with rubber elasticity and high elongation.

UV-3210EA Provides good adhesion to polycarbonate and excellent weather resistance (contains 30% ethyl acetate).

UV-3300B Creates a soft UV cured coating with rubbery elasticity and high elongation. Also provides excellent properties at low temperatures.

UV-3310B Provides good adhesion to polycarbonate and excellent weather, humidity and heat resistance.

UV-3500BA Provides high strength and high elongation, and displays tensile properties similar to urethane elastomer (contains 30% butyl acetate).

UV-3520EA Provides high strength and high elongation, and displays tensile properties similar to urethane elastomer (contains 30% ethyl acetate).

UV-3700B Creates an extremely soft coating with high elongation and excellent flexibility.

UV-6640B Provides excellent water and weather resistance, and creates a tough and flexible coating. Also provides excellent adhesion to soft PVC.

Product	Resin properties			Properties after UV curing						Characteristics & Applications
	Viscosity (mPa·s/60˚C)	Molecular weight (Mw)	Oligomer functionality	Tg (˚C)	Pencil hardness (PET)	Shrinkage ratio (%)	Mechanical properties: Young's modulus (N/mm²)	Mechanical properties: Tensile strength (N/mm²)	Mechanical properties: Tensile elongation (%)	
UV-2000B	40000 ~ 70000	13000	2	–38	6B＞	–	5	5	175	Soft rubber elasticity Sealant for electronic materials
UV-2750B	10000 ~ 25000	3000	2～3	46	2B～B	–	900	40	40	Toughness Screen ink applications Optical disk printing ink applications
UV-3000B	40000 ~ 60000	18000	2	–39	6B＞	4～5	4	7	185	Soft rubber elasticity Metal undercoating applications
UV-3200B	40000 ~ 60000	10000	2	–8	6B＞	4～5	6	9	120	Soft rubber elasticity Metalizing undercoating applications
UV-3210EA	2500 ~ 3500 (20˚C)	9000	2	–10	6B＞	4～5	5	4	70	Soft flexibility, Humidity and heat resistance Optical disk adhesive applications Diluted in 30% ethyl acetate
UV-3300B	5000 ~ 15000	13000	2	–30	6B＞	–	4	12	170	Soft and high elongation, Good elasticity Metalizing undercoating applications
UV-3310B	40000 ~ 70000	5000	2	22	2B	4～5	230	40	80	Weather resistance, Humidity and heat resistance Optical disk adhesive applications
UV-3500BA	5000 ~ 10000 (20˚C)	13000	2	1	6B＞	–	4	5	140	Toughness Metalizing undercoating applications Diluted in 30% butyl acetate
UV-3520EA	8000 ~ 12000 (20˚C)	14000	2	46	6B＞	–	30	40	320	Toughness, Base and middle coating for building materials Plastic undercoating applications Diluted in 30% ethyl acetate
UV-3700B	30000 ~ 60000	38000	2	–6	6B＞	–	0.5	1	180	Flexibility, Good adhesion Adhesive applications
UV-6640B	15000 ~ 25000	5000	2	12	3B	4～5	90	30	85	Water resistance, Weather resistance Adhesive applications

Adhesive Type

Adhesives for optically clear films, masking films, special vanish, etc.

SHIKOH™ 焼光™

<Urethane Acrylate Type>

UV-3630ID80 UV adhesive with medium viscosity. Provides good adhesion to various materials.

UV-3635ID80 UV adhesive with low viscosity. Provides high durability with low ball tack.

UV-3640PE80 UV adhesive with high viscosity. Provides good initial adhesion with relatively high ball tack.

<Acrylic Syrup Type>

UV-NS001 UV adhesive with low viscosity. Provides good initial adhesion with relatively high ball tack.

UV-NS034 UV adhesive with low adhesion. Ideal for masking applications, as adhesion changes little over time.

UV-NS054 UV adhesive with low viscosity. Provides high adhesion and excellent durability, and allows thick coating.

UV-NS063 UV adhesive with low adhesion. Displays one-way adhesion with high pressure, and provides good detachability. Ideal for use in confidential postcard applications, as re-adhesion after peeling is low.

UV-NS089 UV adhesive with high adhesion and excellent durability. Can be used for thick coating. As it contains no acid components, it minimizes corrosion of metal materials.

UV-NS090 UV adhesive with medium adhesion and excellent durability . Can be used for thick coating. As it contains no acid components, it minimizes corrosion of metal materials.

<Urethane Acrylate Type>

Product	Resin Property	Property Evaluation Formulation	Adhesion properties						Optical properties		Characteristics & Applications
	Viscosity (mPa・s/60˚C)		Coating thickness (μm)	Adhesion(N/25mm) *1			Holding power (80˚C)	Ball tack (no.)	Haze (%)	Transmittance (%)	
				Glass	PC	PMMA			0.07	92.9	Slide glass
UV-3630ID80	10000～26000	UV-3630ID80 : Isodecyl acrylate = 100 : 35	175	25.8	13.4	22.4	NC	5	0.30	93.0	Medium adhesion, Medium viscosity Diluted in 20% isodecyl acrylate Optical clear adhesive
UV-3635ID80	3000～8000	UV-3635ID80 : Isodecyl acrylate = 100 : 15	175	0.5	8.8	11.7	NC	5	0.38	92.9	Medium adhesion, Medium viscosity Diluted in 20% isodecyl acrylate Optical clear adhesive
UV-3640PE80	30000～60000	UV-3640PE80 : Phenoxy ethyl acrylate = 100 : 45	175	15.0	14.6	10.0	NC	13	0.41	92.6	Medium adhesion, High viscosity, Tacky surface Diluted in 20% phenoxy ethyl acrylate Optical clear adhesive

Adhesive property measuring conditions: [Composition] UV curable component : Photoinitiator (Irgacure 184) = 100 : 4 [Coating] Coated to a thickness of 30 μm on PET film
[UV irradiation condition] 80 W/cm high-pressure mercury lamp × 13 cmH × 1.5 m/min × 3 pass (total irradiation: 3,000 mJ/cm²)

Optical property measuring conditions: [Composition] UV curable component : Photoinitiator (Irgacure 184) = 100 : 4 [Coating] Coated to a thickness of 175 μm on PET film and laminated with releaseing PET film
[UV irradiation condition] 80 W/cm high-pressure mercury lamp × 18 cmH × 1.9 m/min × 3 pass (total irradiation: 2,400 mJ/cm²)

<Acrylic Syrup Type>

Product	Resin Property	Adhesion properties							Optical properties		Characteristics & Applications
	Viscosity (mPa・s/25˚C)	Coating thickness (μm)	Adhesion(N/25mm)*1				Holding power (80˚C)	Ball tack (no.)	Haze (%)	Transmittance (%)	
			SUS	Glass	PC	PMMA			0.07	92.9	Slide glass
UV-NS001	4000～8000	25	9.5	–	–	–	NC	11	–	–	Medium adhesion, Tacky surface
UV-NS054	500～3000	175	–	39.0	25.9	25.8	NC	<3	0.28	92.8	Strong adhesion Thick coating type, Low viscosity, Thermal resistance Optical clear adhesive
UV-NS089	<1000	175	–	26.1	24.2	23.7	NC	29	0.35	93.2	Strong adhesion Thick coating type, Thearmal resistance, Acid free
UV-NS090	500～3000	175	–	6.7	8.3	10.9	NC	30	0.56	93.2	Medium adhesion Thick coating type, Thearmal resistance, Acid free

Adhesive property measuring conditions: [Composition] UV curdble component : Photoinitiator (Darocur 1173) = 100 : 1 [Coating] Coated to a thickness of 25 μm or 175 μm on PET film and laminated with releaseing PET film
[UV irradiation condition] 80 W/cm high-pressure mercury lamp × 18 cmH × 1.9 m/min × 3 pass (total irradiation: 2,400 mJ/cm²)

Optical property measuring conditions: [Composition] UV curdble component : Photoinitiator (Darocur 1173) = 100 : 1 [Coating] Coated to a thickness of 175 μm on PET film and laminated with releaseing PET film
[UV irradiation condition] 80 W/cm high-pressure mercury lamp × 18 cmH × 1.9 m/min × 3 pass (total irradiation: 2,400 mJ/cm²)

Product	Resin Property	Adhesion properties				Characteristics & Applications
	Viscosity (mPa・s/25˚C)	Adhesion(N/25mm)(SUS)			Ball tack (no.)	
		Initial adhesion		70˚C × 5 days		
		Slow*1	Fast*2			
UV-NS034	4000～8000	0.13	0.30	0.30	<3	Low adhesion, Small dependency on peeling speed Masking film

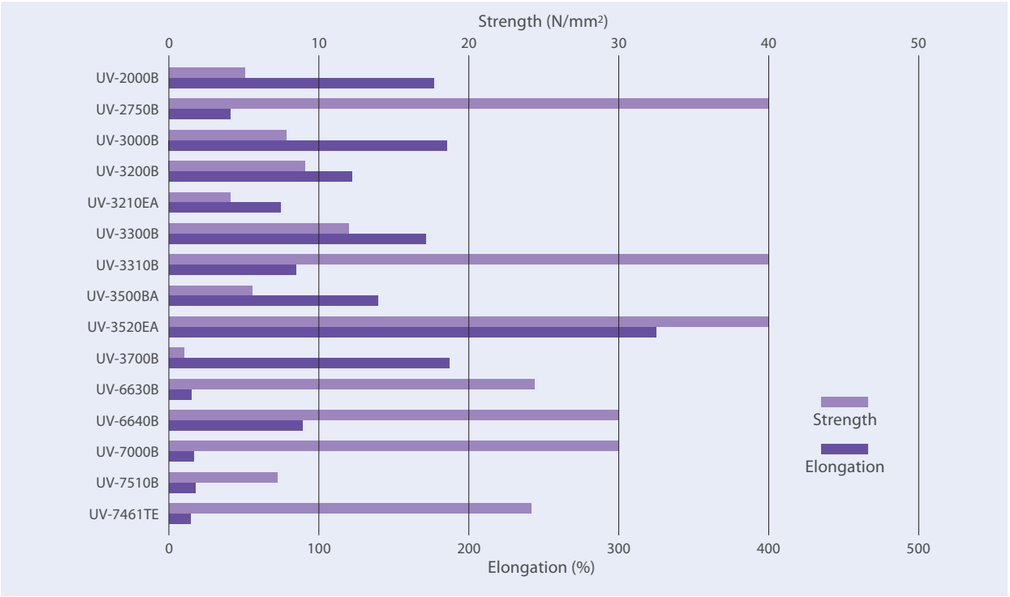
Adhesive property measuring conditions: [Composition] UV curable component : Photoinitiator (Darocur 1173) = 100 : 1 [Coating] Coated to a thickness of 25 μm on PET film and laminated with releaseing PET film
[UV irradiation condition] 80 W/cm high-pressure mercury lamp × 18 cmH × 1.9 m/min × 3 pass (total irradiation: 2,400 mJ/cm²)

Product	Resin Property	Adhesion property	Characteristics & Applications
	Viscosity (mPa・s/25˚C)	Adhesion*3 (N/25mm)	
UV-NS063	100～1000	0.58	Tack free surface, One-way adhesion with high pressure, For confidential postcards

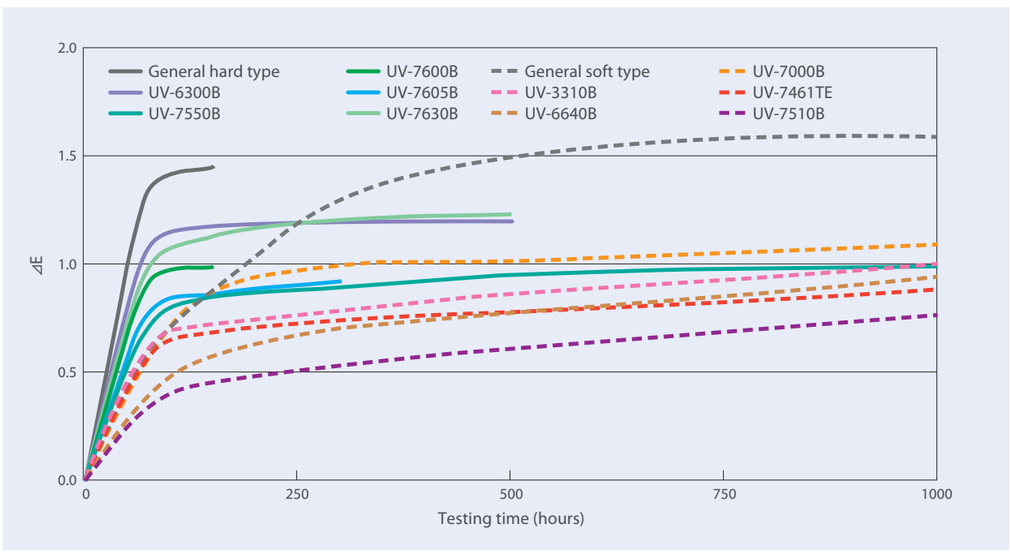
Adhesive property measuring conditions: [Composition] UV curable component : Photoinitiator (Irgacure 907 : Darocur 1173) = 100 : 6.5 : 6.5
[Coating] Coated on coated paper using a bar coater (No. 3)
[UV irradiation condition] 80 W/cm high-pressure mercury lamp × 18 cmH × 18.0 m/min × 1 pass (total irradiation: 60 mJ/cm²)

[Testing Methods]
(1) Adhesion: (*1) 180˚ peel test (peeling speed 0.3 m/min, 23˚C × 50% RH), 30 minutes after application of resin to adherend and pressure bonded twice using a 2 kg roller
(*2)180˚ peel test (peeling speed 30 m/min, 23˚C × 50%RH), 1 hour after application of resin to SUS304BA and pressure bonded twice using a 2 kg roller
(*3)T-peel test (peeling speed 0.3 m/min, 23˚C × 50%RH), after stacking the films and pressure bonding them using a dry sealer
(2) Holding power: 25 mm × 25 mm on SUS, pressure bonded twice using a 2 kg roller, 1 kg load, measuring temperature 80˚C × 24 hours
(3)Ball tack: J. Dow method, 23˚C × 50%RH
(4)Optical properties: Values when applied to a slide glass (slide glass haze: 0.07%, Transmittance: 92.9%, b*: 0.16, YI: 0.48)

<Strength and Elongation of Cured Coating>



<Weather Resistance of Cured Coating (Sunshine weather meter)>



<Optical Properties (representative grade)>

Grade	Characteristics & Application	Refractive index	Transmittance (%)*	Haze*	Surface resistance Ω/□
UV-7600B	Hard coating on optical films	1.52	91.7	0.2	$1.0\times10^{15}<$

*Value includes that of PET film (transmittance 91.4%, haze 0.7)

<Testing Method of UV Cured Coating Properties (excluding adhesive types)>

[Composition]

- UV curable component: Photoinitiator (Irgacure 184 or Darocur 1173) = 100 : 4 *Diluted to NV50% in ethyl acetate when oligomer viscosity is high

[Coating]

- Pencil hardness: Coated to a dry thickness of 10 µm on 125 µm PET film using a bar coater
- Tensile strength: Coated to a dry thickness of 100 µm on PET film using an applicator
- Adhesion: Diluted in isopropyl alcohol (30% oligomer) and coated to a dry thickness of 5 – 10 µm on various materials using a bar coater
- Optical properties: Coated to dry thickness of 5 – 10 µm on PET film
- Surface resistance: Coated to a dry thickness of 5 – 10 µm on treated PET film using a bar coater

[Drying]

Resins that contain an organic solvent or are diluted in an organic solvent were dried as follows.

- Diluting solvent (ethyl acetate, methyl ethyl ketone): 60˚C × 3 min
- Diluting solvent (butyl acetate, toluene, methyl isobutyl ketone, and other high-boiling solvents): 90˚C × 3 min

[UV irradiation]

- Hard types and medium-hard types: 80 W/cm high-pressure mercury lamp × 18 cmH × 5 m/min × 2 pass (total irradiation: 450 mJ/cm²)
- Soft types: 80 W/cm high-pressure mercury lamp × 18 cmH × 2.5 m/min × 2 pass (total irradiation: 800 mJ/cm²)

[Measuring methods]

(1) Pencil hardness: Compliant with JIS K 5600 (load:750g)
(2) Adhesion: Compliant with JIS K 5600, evaluated according to a tape peel test (1mm cross cut)
(3) Tensile strength: 23˚C × 50%RH, Test sample: 15 mm-wide strip, Distance between chucks: 25 mm,
Tensile speed: 10mm/min, Young's modulus: calculated at 1% elongation, Elongation: break elongation
(4) Tg (glass transition temperature): TMA method
(5) Molecular weight: GPC method (Shodex GPC, three KF-806L columns)
(6) Shrinkage: {(Specific gravity of cured resin – Specific gravity of resin solution before curing) / Specific gravity of cured resin} × 100
(7) Optical properties : Compliant with JIS K 7105
Refractive index: Abbe refractometer
Transmittance: Haze meter (transmittance of PET film included)
Haze: Haze meter (haze of PET film included)
(8) Surface resistance: Compliant with JIS K 6911, measured under a 23˚C × 50%RH atmosphere using DIA Instruments' Hiresta UP resistivity meter
(9) Weather resistance: Accelerated weathering test compliant with JIS K 5400 (Sunshine weather meter)

<Storage>

- Store SHIKOH resins in a cool and dark place away from exposure to direct sunlight.

<Handling Precautions>

- Wipe away any leakage with a cloth and wash the area with a solvent such as ethyl acetate.
- Wear proper protection when using SHIKOH resin, as any contact with the skin may cause a rash. In case of skin contact, wash skin thoroughly with soap and water.

This catalog has been created based on Nippon Gohsei's technical knowledge, but does not necessarily guarantee performance in all applications. Similarly, figures contained herein are representative values, and not guaranteed values.
Please use SHIKOH products after fully examining their applicability, or contact us should you have any questions.