

SHANGHAI XIN GEN TECH CO.,LTD

TPU FILM TOTAL SOLUTION PROVIDER.



XG34 Series

Our XG34 Series Thermoplastic Polyurethane (TPU) interlayer film is designed to achieve seamless bonding with both organic and inorganic materials (glass, acrylics, polycarbonate, PET, PMMA etc.).

Our Advantages:

Superior light transmittance >91% after lamination

Wide weather resistant range -55°C-100°C

The only interlayer with bubble-free bonding to Polycarbonate (PC)

Outstanding UV Stability, Non-yellowing

Optimized Grid-pattern Surface for Autoclave Processing

Main Applications:

- Ballistic and armor glass
- Curved laminated glass
- Security glass for bank counters
- High-speed rail front windshield
- Car front windshield

XG3475

Report number 202602271001
Thickness Option 0.38mm 0.63mm 0.76mm 1.27mm
Width 1016mm 1524mm

Product Features & Applications

High Weather Resistance
Excellent Bonding Strength with Glass,Acrylic and PC
Good Uv Stability

Application fields Armored vehicle glass, lightweight automotive glass, photovoltaic glass, high-speed rail windshield glass, security glass, military-grade products.

Test Location Constant Temperature and Humidity Laboratory
Test Environment 23°C/50%RH

NOTES

All data above are provided by the Technical Department for reference only, which shall not constitute any quality warranty or judgment basis. Customers are advised to carry out sample testing before processing, and start mass production only after samples conform to your own usage standards.

TPU film shall be stored in dry and well-ventilated indoor space. Once the package is opened, please use it as soon as possible or reseal for storage.

If any problems occur during product application, please contact our Technical Department via email: info@xgtpu.com.

Inspector: Zhang Huan **Reviewed by:** Wang Yibo **Approved by:** Han Guiquan

Shanghai Xingen Technology Co., Ltd.
Building 3 & 4, No.369 Maoting Road, Songjiang District, Shanghai, China, Post Code: 201611

TEST ITEM	UNIT	TEST METHOD		XG3475 0.38mm	XG3475 0.63mm	XG3475 0.76mm	XG3475 1.27mm
Tensile Strength	MPa	ASTM D412-2021	CD	47	40.1	36.4	37.2
			MD	45.2	39.1	40.4	37.1
100%MOD	MPa	ASTM D412-2021	CD	3.6	5.6	3.9	5.1
			MD	3.7	5.5	4	5.8
300%MOD	MPa	ASTM D412-2021	CD	13.8	14.1	12.3	18.7
			MD	14.5	13.9	12.4	15.6
Elongation at Break	%	ASTM D412-2021	CD	414	459	406	379
			MD	406	457	417	408
Tear Strength	KN/m	ASTM D624-2000	CD	53.5	80	53.7	80
			MD	53.6	81.3	55	78.4
Haze after Glass Lamination	%	ASTM D1003-2021	-	1.14	1.14	1.14	1.14
Light Transmittance after Glass Lamination	%	ASTM D1003-2021	-	90.48	90.48	90.48	90.48
Hardness	HA	GB/T 2411-2008	-	75	75	75	75
Specific Gravity	g/cm ³	ASTM D792-2007	-	1.07	1.07	1.07	1.07
Color	/	Visual Inspection	-	Natural	Natural	Natural	Natural
Film surface	/	Visual Inspection	-	Grid	Grid	Grid	Grid
Yellowing Resistance Grade	/	Internal Standard XZ-SYS-05 (528h)	-	4	4	4	4
				△b=0.06	△b=0.06	△b=0.06	△b=0.06
				△E=1.05	△E=1.05	△E=1.05	△E=1.05
Melting Point	°C	GB/T 19466.3-2004	-	95	95	95	95
Glass Transition Point	°C	ASTM D395-18	-	-55	-55	-55	-55
Boiling Water Test	/	100°C, 6h		PASS	PASS	PASS	PASS
Temperature Cycling Test	/	-40°C ~ 95°C		PASS	PASS	PASS	PASS

XG3465

Report number 202604171001
Thickness Option 0.38mm 0.63mm 0.76mm 1.27mm
Width 1016mm 1524mm

Product Features & Applications

High Weather Resistance
Excellent Bonding Strength with Glass,Acrylic and PC
Good Uv Stability

Application fields Curved glass, automotive panoramic sunroof, automotive windshield

Test Location Constant Temperature and Humidity Laboratory
Test Environment 23°C/50%RH

NOTES

All data above are provided by the Technical Department for reference only, which shall not constitute any quality warranty or judgment basis. Customers are advised to carry out sample testing before processing, and start mass production only after samples conform to your own usage standards.

TPU film shall be stored in dry and well-ventilated indoor space. Once the package is opened, please use it as soon as possible or reseal for storage.

If any problems occur during product application, please contact our Technical Department via email: info@xgtpu.com.

Inspector: Zhang Huan **Reviewed by:** Wang Yibo **Approved by:** Han Guiquan

Shanghai Xingen Technology Co., Ltd.
Building 3 & 4, No.369 Maoting Road, Songjiang District, Shanghai, China, Post Code: 201611

Test Item	Unit	Test Standard	Instrument No.		XG3465 0.63mm	XG3465 1.27mm
Tensile Strength	MPa	ASTM D412-2021	G-LLY-002	CD	30.8	22.5
				MD	29.6	13.3
Modulus at 100%	MPa	ASTM D412-2021	G-LLY-002	CD	2	1.8
				MD	1.9	1.7
Modulus at 300%	MPa	ASTM D412-2021	G-LLY-002	CD	3.3	2.9
				MD	3.2	2.8
Elongation at Break	%	ASTM D412-2021	G-LLY-002	CD	598	619
				MD	597	546
Tear Strength	KN/m	ASTM D624-2000	G-LLY-002	CD	37.2	36.4
				MD	37.6	35.5
Thickness	mm	ASTM D3767-2020	G-CHY-008	-	0.63	1.27
Haze	%	ASTM D1003-2021	G-WDJ-002	-	92.4	89.4
Light Transmittance	%	ASTM D1003-2021	G-WDJ-002	-	89	75.4
Hardness	HA	GB/T 2411-2008	G-YDJ-002	-	68	69
Density	g/cm ³	ASTM D792-2007	G-FXTP-001	-	1.05	1.05
Grammage	g/m ²	DIN EN 12127-1997	G-FXTP-001	-	630.1	1365.9
Color	/	Visual Inspection	/	-	Natural	Natural
Surface Effect	/	Visual Inspection	/	-	Grid	Grid
Yellowing Resistance Grade	Grade	Internal Standard XZ-SYS-05	G-ZWX-001	-	△b=1.38	△b=1.38
					△E=1.86	△E=1.86
					4	4

XG3476

Report number 202604171001
Thickness Option 0.38mm 0.63mm 0.76mm 1.27mm
Width 1016mm 1524mm

Product Features & Applications

High Weather Resistance
Excellent Bonding Strength with Glass,Acrylic and PC
Good UV Stability

Application fields Smart glass, photovoltaic glass

Test Location Constant Temperature and Humidity Laboratory
Test Environment 23°C/50%RH

NOTES

All data above are provided by the Technical Department for reference only, which shall not constitute any quality warranty or judgment basis. Customers are advised to carry out sample testing before processing, and start mass production only after samples conform to your own usage standards.

TPU film shall be stored in dry and well-ventilated indoor space. Once the package is opened, please use it as soon as possible or reseal for storage.

If any problems occur during product application, please contact our Technical Department via email: info@xgtpu.com.

Inspector: Zhang Huan **Reviewed by:** Wang Yibo **Approved by:** Han Guiquan

Shanghai Xingen Technology Co., Ltd.
Building 3 & 4, No.369 Maoting Road, Songjiang District, Shanghai, China, Post Code: 201611

Test Item	Unit	Test Standard	Instrument No.		XG3476 0.63mm	XG3476 1.27mm
Tensile Strength	MPa	ASTM D412-2021	G-LLY-002	CD	38.5	30.6
				MD	36.4	29
Modulus at 100%	MPa	ASTM D412-2021	G-LLY-002	CD	3.7	3.5
				MD	3.7	3.4
Modulus at 300%	MPa	ASTM D412-2021	G-LLY-002	CD	10.8	8.6
				MD	11.2	8.9
Elongation at Break	%	ASTM D412-2021	G-LLY-002	CD	450	473
				MD	435	451
Tear Strength	KN/m	ASTM D624-2000	G-LLY-002	CD	55.2	58.1
				MD	56.3	54.9
Thickness	mm	ASTM D3767-2020	G-CHY-008	-	0.63	1.25
Haze	%	ASTM D1003-2021	G-WDJ-002	-	83.8	89.7
Light Transmittance	%	ASTM D1003-2021	G-WDJ-002	-	86.7	88.8
Hardness	HA	GB/T 2411-2008	G-YDJ-002	-	77	79
Density	g/cm ³	ASTM D792-2007	G-FXTP-001	-	1.06	1.06
Grammage	g/m ²	DIN EN 12127-1997	G-FXTP-001	-	631.6	1346.9
Color	/	Visual Inspection	/	-	Natural	Natural
Surface Effect	/	Visual Inspection	/	-	Grid	Grid
Yellowing Resistance Grade	Grade	Internal Standard XZ-SYS-05	G-ZWX-001	-	△b=0.70	△b=0.51
					△E=0.75	△E=0.81
					4-5	4-5

XG40475

Report number 202603161001
Thickness Option 0.38mm 0.63mm 0.76mm 1.27mm
Width 1016mm 1524mm

Product Features & Applications

Excellent weather resistance, superior bonding strength with glass, acrylic and polycarbonate (PC), stable anti-UV performance, outstanding UV-resistance &IR-resistance

Application fields Insulated glass, architectural glass, automotive windows, automotive sunroofs

Test Location Constant Temperature and Humidity Laboratory
Test Environment 23°C/50%RH

NOTES

All data above are provided by the Technical Department for reference only, which shall not constitute any quality warranty or judgment basis. Customers are advised to carry out sample testing before processing, and start mass production only after samples conform to your own usage standards.

TPU film shall be stored in dry and well-ventilated indoor space. Once the package is opened, please use it as soon as possible or reseal for storage.

If any problems occur during product application, please contact our Technical Department via email: info@xgtpu.com.

Inspector: Zhang Huan **Reviewed by:** Wang Yibo **Approved by:** Han Guiquan

Shanghai Xingen Technology Co., Ltd.
Building 3 & 4, No.369 Maoting Road, Songjiang District, Shanghai, China, Post Code: 201611

Test Item	Unit	Test Standard	Instrument No.		XG3476 0.63mm	XG3476 1.27mm
Tensile Strength	MPa	ASTM D412-2021	G-LLY-002	CD	38.5	30.6
				MD	36.4	29
Modulus at 100%	MPa	ASTM D412-2021	G-LLY-002	CD	3.7	3.5
				MD	3.7	3.4
Modulus at 300%	MPa	ASTM D412-2021	G-LLY-002	CD	10.8	8.6
				MD	11.2	8.9
Elongation at Break	%	ASTM D412-2021	G-LLY-002	CD	450	473
				MD	435	451
Tear Strength	KN/m	ASTM D624-2000	G-LLY-002	CD	55.2	58.1
				MD	56.3	54.9
Thickness	mm	ASTM D3767-2020	G-CHY-008	-	0.63	1.25
Haze	%	ASTM D1003-2021	G-WDJ-002	-	83.8	89.7
Light Transmittance	%	ASTM D1003-2021	G-WDJ-002	-	86.7	88.8
Hardness	HA	GB/T 2411-2008	G-YDJ-002	-	77	79
Density	g/cm ³	ASTM D792-2007	G-FXTP-001	-	1.06	1.06
Grammage	g/m ²	DIN EN 12127-1997	G-FXTP-001	-	631.6	1346.9
Color	/	Visual Inspection	/	-	Natural	Natural
Surface Effect	/	Visual Inspection	/	-	Grid	Grid
Yellowing Resistance Grade	Grade	Internal Standard XZ-SYS-05	G-ZWX-001	-	△b=0.70	△b=0.51
					△E=0.75	△E=0.81
					4-5	4-5

XG-Edge Sealing Film

Report number 202605161004

Thickness Option 1.27mm

Width Customizable

Product Features & Applications

Excellent moisture-proof performance, decorative protection and chemical resistance

Application fields Military glass, edge sealing for glass used in special environments

Test Location Constant Temperature and Humidity Laboratory

Test Environment 23°C/50%RH

NOTES

All data above are provided by the Technical Department for reference only, which shall not constitute any quality warranty or judgment basis. Customers are advised to carry out sample testing before processing, and start mass production only after samples conform to your own usage standards.

TPU film shall be stored in dry and well-ventilated indoor space. Once the package is opened, please use it as soon as possible or reseal for storage.

If any problems occur during product application, please contact our Technical Department via email: info@xgtpu.com.

Inspector: Zhang Huan **Reviewed by:** Wang Yibo **Approved by:** Han Guiquan

Shanghai Xingen Technology Co., Ltd.
Building 3 & 4, No.369 Maoting Road, Songjiang District, Shanghai, China, Post Code: 201611

Test Item	Unit	Test Standard	Instrument No.		XG-EdgeSeal 1.27mm
Tensile Strength	MPa	ASTM D412-2021	G-LLY-002	CD	30.2
				MD	25.3
Modulus at 100%	MPa	ASTM D412-2021	G-LLY-002	CD	4.5
				MD	4.5
Modulus at 300%	MPa	ASTM D412-2021	G-LLY-002	CD	10.4
				MD	10.7
Elongation at Break	%	ASTM D412-2021	G-LLY-002	CD	420
				MD	396
Tear Strength	KN/m	ASTM D624-2000	G-LLY-002	CD	61.7
				MD	61.5
Thickness	mm	ASTM D3767-2020	G-CHY-008	-	1.27
Density	g/cm ³	ASTM D792-2007	G-FXTP-001	-	1.09
Grammage	g/m ²	DIN EN 12127-1997	G-FXTP-001	-	649.1
Color	/	Visual Inspection	/	-	Natural
Surface Effect	/	Visual Inspection	/	-	Single-sided PP release paper

Recommended Processing Manual of XG3475 Aiphatic Glass Interlayer Film

1、Pre-Processing & Vaccum

Cut the TPU interlayer film to required size. Then use an adhesive roller, blow the surface with ionized clean air, and wipe it with a lint-free cloth.

If there is too much dust on the glass surface, wash with ionized water below 55°C, dry, and cool to room temperature before lamination, ensuring that the moisture content of the film is below 0.01%.

NOTES & REMARK

During autoclaving, the laminated glass should be spaced properly on the racks, with a minimum gap of about 20 mm between each piece. Localized pressure on the glass should be avoided, as uneven stress may cause non-uniform TPU thickness and optical distortion during heating. The inclination angle of the glass on the rack should not exceed 10°.

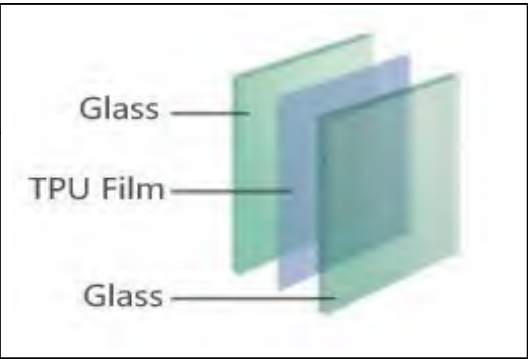
The duration of the constant temperature and pressure phase can be adjusted according to glass thickness, with a reference time of approximately 75 mins. If the glass/film/PC layers increases, the holding time may be extended accordingly.

The autoclave cooling rate should not be lower than 2.5°C /min. During cooling, maintain internal pressure until depressurization and venting are completed at room temperature.

The vacuum bag should only be opened after cooling to room temperature. Due to equipment cooling capacity limits, ensure uniform cooling, as the cooling rate directly affects the transparency of the final product.

Shelf Life: 12 months Storage: cool and dry environment

2、Autoclave Process

	First Phrase	Second Phrase	Vaccum Extraction	
Temperature	60-90°C	125-132°C	100Kpa	
Autoclave Pressure	1.18-1.25Mpa			
Time	30mins	75mins		



Shanghai Xin Gen Tech Co., Ltd., founded in 2014, is an innovative technology enterprise specializing in TPU total solutions. With an 8,300 m² factory and a daily capacity of 30 tons, we supply high-quality TPU films widely used in glass, medical, automotive, outdoor, and electronics industries—earning strong recognition from customers worldwide.

Every piece of real ballistic glass relies on polycarbonate—and only a high-performance TPU can bond it flawlessly. Our TPU interlayer is engineered precisely for this purpose, giving you the clarity, strength, and reliability your protection systems demand. This is where you find the product that truly meets your standards.

XINGEN





TPU interlayer film is ideal for a wide range of applications, including armored vehicles and automotive bullet resistant glass, curved glass, bank counter safety glass, and high-speed rail front windshield.

It delivers excellent performance and reliability across all these demanding uses.

Quality Management System



ISO9001



IATF16949



ISO14001



ISO18001



GRS

Product Certificate



Reach



Rohs



Oeko-Tex



Ca Prop65



Biocompatibility
certificate

Test Instrument



Test Instrument



THANKS

XIN GEN TECH CO.,LTD

☎ 152-2121-6273 ✉ info@xgtpu.com

🖱 www.xgtpu.com www.xgtpufilm.com www.functech.cn

☎ 021-67842784 (Shanghai) 0755-27212249 (Shenzhen)

📍 Building 3、4 No.369 Maoting Road Songjiang District, Shanghai, China 201611
Room 706, 712 Building 1, Hanyu Bay Innovation Port, Fuhai Subdistrict Bao'an
District Shenzhen,China ,518103

