











i protect

SHRINK FILM

IPG[®] is a recognized global leader in packaging and protective solutions. We began producing polyolefin shrink film in 1993. For three decades, we have been shrink wrapping products throughout the world with films produced at our manufacturing sites in the US and Portugal.

NORTH AMERICAN MANUFACTURING

In January 2022, IPG expanded its North American shrink film production by acquiring a new film plant in Everetts, NC that allowed us to increase our production capacity and product types. This expansion will help us grow with our North American distributor partners. IPG will continue to invest in people, capital assets and product development to maintain our position and the Exlfilm[®] line as world leaders in shrink film performance and technology.

The values of a safe work environment, environmental stewardship and good corporate citizenship are deeply embedded in IPG's culture. We live these values every day through our effective resource management, product innovation and our commitment to meet and exceed customer expectations.

IPG SUSTAINABLE ACHIEVEMENTS AND FOOD GRADE CERTIFICATIONS



©Exlfilm® brand shrink film

Exlfilm[®] polyolefin shrink film is engineered to make your packaging look its absolute best, while providing unmatched value, versatility and durability.



Exlfilm*plus*[®] films are crosslinked. The "plus" of crosslinking provides customers with a stronger film capable of working on a wider variety of equipment and sealing systems.

CROSSLINKING TECHNOLOGY

This innovative technique makes Exlfilmplus Shrink Films one of the toughest and most versatile on the market. This is because the polymer chains are permanently bound into a network, significantly increasing their heat stability and strength. Our films have an inherently greater window of seal and shrink performance at a broader range of temperatures.



- Prevention of buildup on wires and knives during sealing
- Prevention of film burn-through in heat tunnels
- Increased film toughness on the finished package

In Crosslinking Technology, bonds are created where molecules crosslink, resulting in a much stronger film.



SUSTAINABLITY

- Exlfilm and Exlfilmplus shrink films are pre-approved for the store-drop off label through the How2Recycle® program
- **Post-consumer recycled (PCR) content** Exlfilm*plus* PCR contains 20% certified PCR
- Post-industrial recycled (PIR) content Exlfilmplus GPL, Exlfilmplus GPS, Exlfilmplus PCR, Exlfilmplus SHIELD, Exlfilmplus 365 and Exlfilm 307 contain up to 25% PIR
- Cradle to Cradle Certified[®] Exlfilm*plus* GPL, Exlfilm*plus* GPS, Exlfilm*plus* PCR, Exlfilm*plus* SHIELD and Exlfilm*plus* 365 are Cradle to Cradle Certified[®] Silver
- Downgauge solutions Exlfilm*plus* GPL, Exlfilm*plus* PCR and Exlfilm*plus* 365 unique film formulations offer similar performance to thicker standard gauge film. Reduce film, save time, and save money.
- Exlfilmplus shrink films are made in two North American TRUE Certified Zero Waste facilities









Exlfilmplus PCR is the first clear polyolefin shrink film containing postconsumer recycled content. IPG's breakthrough proprietary film blend contains 20% post-consumer recycled content and up to 25% postindustrial recycled content for a total of 45% recycled content, making it an even more sustainable solution. Exlfilmplus PCR offers 7%-9% yield savings compared to traditional films. Exlfilmplus PCR is the ideal choice for customers seeking a more circular, sustainable shrink packaging solution.

©Exlfilmplus PCR

KEY PERFORMANCE FEATURES

- Performs well on all sealing systems and tunnels
- Consistent shrink
- Strong seals



MINIMUM 45% RECYCLED CONTENT 20% POST-CONSUMER 25% PRE-CONSUMER

BENEFITS

- Contains 20% certified postconsumer recycled content
- Contains 25% certified postindustrial recycled content
- 7% 9% less film used when compared to standard products**
- Made in a certified zero waste facility
- Pre-qualified for the How2Recycle store drop-off label





CHARACTERISTICS	TEST METHOD	45 G/	AUGE	55 G/	AUGE	70 GAUGE		
Roll Length – Center Fold		5,8	30	4,7	70	3,7	50	
Roll Length – Single Wound		11,0	560	9,5	40	7,5	00	
Post-Consumer Recycled Content		20	1%	20)%	20	%	
Post-Industrial Recycled Content		15	%	25	5%	25%		
Low Temperature Usage (°F)		-4	5°	-4	5°	-45°		
Shrink Temperature (°F)		240 -	340°	240 -	340°	240 - 340°		
Max. Storage Temp. (°F) 2 years max.		91)°	90°		90°		
Haze %	D1003	4	8	5	.0	5.	2	
Gloss at 20°	D2457	11	0	11	10	10	0	
Coefficient of Friction (film to film), kinetic	D1894	0.	2	0	0.2		2	
Oxygen Transmission Rate (cc/100 in ² /24 hrs.)	D3985	1,2	03	87	74	58	0	
Water Vapor Transmission Rate (g/100 in²/24 hrs.)	F1249	0.3	88	0.4	45	0.45		
		MD	TD	MD	TD	MD	TD	
Tensile Strength (PSI)	D882	18,000	18,000	18,000	18,000	18,000	18,000	
Elongation at Break (%)	D882	115	115 125 120		130	120	130	
Stiffness Modulus (PSI)	D882	38,000	40,000	40,000	42,000	40,000	42,000	
Unrestrained Shrink (%) @ 250°F	D2732	65	65	65	65	65	65	
Tear Propagation (g / ply)	D1922	12	12	15	15	18	18	

Note: These values are typical and not intended as limiting specifications. $\ensuremath{\textit{MD}}\xspace = \ensuremath{\textit{Machine}}\xspace$

TD = Transverse Direction

**When comparing 55G vs 60G films or 70G vs 75G films



Exlfilmplus PCR is pre-approved for the Store Drop-off label through the How2Recycle® program.

Exlfilm*plus* GPL, available in 35, 42, and 55 gauge, is a thin gauge, high performance, crosslinked polyolefin shrink film. Exlfilm*plus* GPL provides customers superior machinability, clarity and cost savings through higher yield. Exlfilm*plus* GPL's unique shrink characteristics make it the ideal choice for both general use and light force applications for printers, bakeries and many others.

BENEFITS

- Ultra light gauge
- Lowest cost per package
- Consistently strong seals
- Superior clarity and gloss
- Minimal shrink force

- Excellent machinability
- Pre-perforated film available
- Available on 3in or 6in core
- Contains post-industrial recycled content



KEY PERFORMANCE FEATURES

- High yield
- Wide operating window
- Minimal shrink force



CHADACTEDISTICS	TEST	GAUGE									
CHARACTERISTICS	METHOD	3	5	4	2	5	5				
Roll Length – Center Fold		7,5	00	6,2	250	4,770					
Roll Length – Single Wound		15,0	000	12,5	500	9,5	40				
Post Industrial Recycled Content (not less than %)		-	-	1	0	20					
Low Temperature Usage (°F)		-4	5°	-4	5°	-45°					
Shrink Temperature (°F)		240 -	340°	240 -	340°	240 - 340°					
Max. Storage Temp. (°F) 2 years max.		9()°	90°		90°					
Haze %	D1003	2	.1	2.	.3	2	.4				
Gloss at 20°	D2457	12	25	13	35	1:	35				
Coefficient of Friction (film to film), kinetic	D1894	0.1	22	0.2	22	0.22					
Oxygen Transmission Rate (cc/100 in²/24 hrs.)	D3985	15	50	1,1	00	1,100					
Water Vapor Transmission Rate (g/100 in²/24 hrs.)	F1249	1.0	07	0.8	0.81		74				
		MD	TD	MD	TD	MD	TD				
Tensile Strength (PSI)	D882	17,000	17,000	17,000	16,000	17,000	16,000				
Elongation at Break (%)	D882	100	110	115	125	130 140					
Stiffness Modulus (PSI)	D882	50,000	50,000	40,000	40,000	40,000	40,000				
Unrestrained Shrink (%) @ 250°F	D2732	72	72	72	72	72	72				
Tear Propagation (g / ply)	D1922	10	11	11	11	13	13				

Note: These values are typical and not intended as limiting specifications. MD = Machine Direction TD = Transverse Direction



Exlfilmplus GPL is Cradle to Cradle Certified® Silver and pre-approved for the Store Drop-off label through the How2Recycle® program.



Exlfilm*plus* GPS is a high performance crosslinked polyolefin shrink film. This multi-layered film is versatile enough to perform on all sealing systems and shrink tunnels. The premium resin formulation provides our strongest seals ever. Exlfilm*plus* GPS offers high shrink force, making it the ideal choice for multi-packing and unitizing product.



KEY PERFORMANCE FEATURES

- Consistently strong seals
- Wide operating window
- High shrink force

BENEFITS

- Wide window of operation
- Superior sealing performance
- Higher shrink force
- Printable
- FDA compliant

- Excellent machinability
- Pre-perforated film available
- Available on 3in or 6in core
- Contains post-industrial recycled content

CHADACTEDISTICS	TEST	GAUGE											
CHARACTERISTICS	METHOD	4	5	60		75		100		150			
Roll Length – Center Fold		5,8	330	4,375		3,500		2,625		1,750			
Roll Length – Single Wound		11,	660	8,7	750	7,0	000	5,2	250	3,5	000		
Post Industrial Recycled Content (not less then %)		1	15		20		20		20		20		
Low Temperature Usage (°F)		-4	5°	-45°		-45°		-45°		-45°			
Shrink Temperature (°F)		240 -	· 340°	240 -	· 340°	240 - 340°		240 - 340°		240 - 340°			
Max. Storage Temp. (°F) 2 years max.		9	0°	90°		90°		90°		90°			
Haze %	D1003	2	2.6		2.8		3.0		3.3		4.5		
Gloss at 20°	D2457	1:	135		135		135		125		115		
Coefficient of Friction (film to film), kinetic	D1894	0	.2	0	.2	0	0.2 0.2		.2	0.17			
Oxygen Transmission Rate (cc/100 in²/24 hrs.)	D3985	1,2	203	8	74	7	700 503		503		19		
Water Vapor Transmission Rate (g/100 in²/24 hrs.)	F1249	0.	88	0.	0.45		0.39 0.29		0.	20			
		MD	TD	MD	TD	MD	TD	MD	TD	MD	TD		
Tensile Strength (PSI)	D882	18,000	18,000	18,000	18,000	18,000	18,000	20,000	20,000	15,000	16,000		
Elongation at Break (%)	D882	115	125	120	130	130	135	140	150	160	160		
Stiffness Modulus (PSI)	D882	38,000	40,000	40,000	42,000	42,000	44,000	43,000	48,000	35,000	45,000		
Unrestrained Shrink (%) @ 250°F	D2732	65	65	65	65	65	65	65	65	63	63		
Tear Propagation (g / ply)	D1922	12	12	16	16	18	18	25	25	30	30		

Note: These values are typical and not intended as limiting specifications. MD = Machine Direction TD = Transverse Direction



Exlfilmplus GPS is Cradle to Cradle Certified® Silver and pre-approved for the Store Drop-off label through the How2Recycle® program.



Exlfilmplus 365 is a newly developed all-purpose crosslinked polyolefin shrink film. This uniquely engineered multi-layered film demonstrates exceptional performance on manual, semi-automatic and high-speed automatic equipment. The thinner gauges offer a 7%-11% yield savings compared to traditional films. In addition to material savings, longer roll lengths improve uptime due to fewer roll changeovers. Exlfilmplus 365 exhibits strong seals, quick shrink initiation, and improved optics. Exlfilmplus 365 delivers worry free performance "All day, every day".

©Exlfilmplus 365

KEY PERFORMANCE FEATURES

- Wide operating window
- Quick shrink initiation
- Improved optics

Optional pre-perforation

• Available on 3" and 6" core

BENEFITS

- 7% 11% Yield savings when compared to traditional films
- Wide window of operation
- Category leading shrink performance
- FDA compliant



	TEST	GAUGE														
CHARACTERISTICS	METHOD	4	5	5	5	7	0	9	0	115		150		200		
Roll Length – Center Fold		5,8	330	4,7	70	3,7	750	2,910		2,280		1,750		1,310		
Roll Length – Single Wound		11,	660	9,5	9,540		7,500		5,820		4,560		3,500		2,620	
Post Industrial Recycled Content (not less then %)		ļ	5	1	10		10		15		15		20		20	
Low Temperature Usage (°F)		-4	5°	-4	-45°		-45°		-45°		-45°		-45°		-45°	
Shrink Temperature (°F)		240 -	340°	240 -	240 - 340°		240 - 340°		240 - 340°		240 - 340°		240 - 340°		240 - 340°	
Max. Storage Temp. (°F) 2 years max.		9	0°	9(90°		90° 9		0°	90°		90°		90°		
Haze %	D1003	3	.5	3.	.5	4.0		4.6		5.4		6.0		6.0		
Gloss at 20°	D2457	12	20	12	20	1	110		100		100		100		100	
Coefficient of Friction (film to film), kinetic	D1894	0.	21	0.1	21	0.	21	0.20		0.20		0.17		0.17		
Oxygen Transmission Rate (cc/100 in²/24 hrs.)	D3985	7	70	70	00	58	80	520		400		300		250		
Water Vapor Transmission Rate (g/100 in²/24 hrs.)	F1249	0.	65	0.	55	0.	.45 0.32		32	0.26		0.20		0.16		
		MD	TD	MD	TD	MD	TD	MD	TD	MD	TD	MD	TD	MD	TD	
Tensile Strength (PSI)	D882	12,500	13,000	12,500	13,000	12,500	13,000	12,500	13,000	12,500	13,000	12,500	13,000	12,500	13,000	
Elongation at Break (%)	D882	100	115	110	115	110	115	125	130	150	150	160	150	160	150	
Stiffness Modulus (PSI)	D882	30,000	40,000	30,000	40,000	30,000	40,000	30,000	40,000	30,000	30,000	30,000	30,000	30,000	30,000	
Unrestrained Shrink (%) @ 250°F	D2732	72	72	72	72	72	72	72	72	72	72	70	70	70	70	
Tear Propagation (g / ply)	D1922	18	14	20	16	22	18	25	20	40	30	45	45	45	45	

Note: These values are typical and not intended as limiting specifications. MD = Machine Direction; TD = Transverse Direction

Exlfilm 307 is a strong, multi-layered polyolefin shrink film with balanced shrink properties. This film is ideally suited for high speed static lap and wire sealing systems, and exhibits superior clarity, gloss, and optics.

@Exlfilm^{.307}

KEY PERFORMANCE FEATURES

- High yield
- Wide operating window
- Excellent optics



- High speed performance
- Excellent machinability
- Superior clarity and gloss
- Excellent static sealing
- Consistently strong seals
- Pre-perforated film available
- Available on 3in or 6in core



	TECT METHOD	GAUGE									
CHARACTERISTICS	IESI MEIHOD	5	0	6	0	7	5	1(00		
Roll Length – Center Fold		5,250		4,375		3,500		2,625			
Roll Length – Single Wound		10,	500	8,7	50	7,0	00	5,2	50		
Low Temperature Usage (°F)		-4	0°	-4	0°	-4	0°	-4	0°		
Shrink Temperature (°F)		240 -	· 340°	240 -	340°	240 -	340°	240 -	340°		
Max. Storage Temp. (°F) 2 years max.		9	0°	90	٥°	9(90°)°		
Haze %	D1003	3	.0	3.	.2	3.	3.4		.6		
Gloss at 20°	D2457	12	25	11	15	115		115			
Coefficient of Friction (film to film), kinetic	D1894	0.	15	0.	15	0.15		0.15			
Oxygen Transmission Rate (cc/100 in²/24 hrs.)	D3985	52	27	43	31	34	14	333			
Water Vapor Transmission Rate (g/100 in²/24 hrs.)	F1249	1.9	91	1.	52	1.1	79	0.93			
		MD	TD	MD	TD	MD	TD	MD	TD		
Tensile Strength (PSI)	D882-80	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000		
Elongation at Break (%)	D882-80	120	120	120	120	140	140	140	140		
Stiffness Modulus (PSI)	D882-80	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000		
Unrestrained Shrink (%) @ 250°F	D2732	62	62	62	62	62	62	62	62		
Tear Propagation (g/ply)	D1922	11	11	14	14	20	20	25	25		

Note: These values are typical and not intended as limiting specifications. MD = Machine Direction; TD = Transverse Direction



IPG's new Exlfilm*plus* Shield is a polyolefin shrink film designed to conceal the contents of wrapped products. This heavy-duty film can be used to replace expensive corrugated containers.

©Exlfilmplus SHIELD

KEY PERFORMANCE FEATURES

- Fully opaque gray film
- Designed for fulfillment houses and e-commerce shippers
- Fully recyclable



- Eliminates the corrugated container and void fill when packaging items strong enough to withstand the rigors of shipping
- High speed pack off for improved output rates and lower labor costs
- Crosslinked technology provides consistent sealing and shrinking
- Printable for enhanced marketing opportunities



CHARACTERISTICS	TEST	GAUGE							
CHARACIERISTICS	METHOD	10	00	150					
Color		Gr	ау	Gray					
Roll Length – Center Fold		2,6	25	1,750					
Roll Length – Single Wound		5,2	250	3,5	500				
Post Industrial Recycled Content (not less than %)		2	5	25					
Low Temperature Usage (°F)		-4	5°	-45°					
Shrink Temperature (°F)		240 -	340°	240 - 340°					
Max. Storage Temp. (°F) 2 years max.		91	٥°	90°					
Transmittance %	D1003	5	.5	2.5					
Gloss at 20°	D2457	6	60		8				
Coefficient of Friction (film to film), kinetic	D1894	0.	17	0.12					
Oxygen Transmission Rate (cc/100 in²/24 hrs.)	D3985	42	21	265					
Water Vapor Transmission Rate (g/100 in²/24 hrs.)	F1249	.3	32	.1	9				
		MD	TD	MD	TD				
Tensile Strength (PSI)	D882	14,000	14,000	14,000	14,000				
Elongation at Break (%)	D882	150	140	155	145				
Stiffness Modulus (PSI)	D882	47,000	50,000	35,000	45,000				
Unrestrained Shrink (%) @ 250°F	D2732	65	65	63	63				
Tear Propagation (g/ply)	D1922	23	23	35	35				

Note: These values are typical and not intended as limiting specifications.

MD = Machine Direction; TD = Transverse Direction



Exlfilmplus GPS is Cradle to Cradle Certified® Silver and pre-approved for the Store Drop-off label through the How2Recycle® program.



i protect

CORPORATE PROFILE

Headquartered in Sarasota, Florida, IPG is a global provider of packaging and protective solutions across a diversified set of geographies and end-markets. The Company develops, manufactures, and sells a variety of solutions including paper and film-based pressure-sensitive and water-activated tapes, stretch and shrink films, protective packaging, woven and non-woven products and packaging machinery.



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