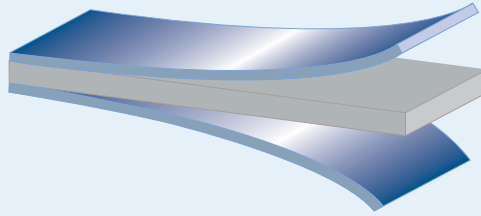


Propafilm™ GLS (Tobacco)

Technical Datasheet

GLS - High Speed Overwrapping Film with Shrink Tightening Properties.

Biaxially oriented polypropylene (BOPP) film co-extruded on both sides with heat-sealable polyolefinic copolymers.



High Slip Sealable Layer
Oriented Polypropylene Blend
Low Slip Sealable Layer

Features

- Superior sparkling appearance
- Superior controlled, balanced shrinkage
- Enhanced machine performance
- Excellent moisture and flavour barrier
- Differential slip properties for tight wraps
- Overcomes film relaxation problems
- Resistant to solvent attack

Applications

GLS are suitable for use in the tobacco industry for both high speed overwrapping of unit packs and display outers where exceptional pack appearance and wrap tightness are required.



Technical Properties (Typical Values)

Property	Test Method	Test Conditions	Units	GLS	
Thickness	Innovia Films test		micron	20	25
			gauge	80	100
Yield	Innovia Films test		m ² /kg	54.9	44.0
			in ² /lb	38600	30900
			g/m ²	18.2	22.7
Permeability to: Water vapour	ASTM F 1249	38°C 90% RH 100°F 90% RH	g/m ² .24 hrs	6.0	4.1
			g/100in ² . 24 hrs	0.39	0.26
Oxygen	ASTM F 1927	23°C 0% RH 73°F 0% RH	cc/m ² .24 hrs cc/100in ² . 24 hrs	1500 97	1400 90
Optical: Gloss	ASTM D 2457	20°	units	140	
Haze (wide angle)	ASTM D 1003	2.5°	%	1.0	
Coefficient of friction (out to out)	ASTM D 1894	Static/ Dynamic		0.40	
				0.25	
Tensile strength	ASTM D 882	Strain rate 50% / min	MN/m ²	MD	170
				TD	210
			lb/in ²	MD	24700
				TD	30500
Elongation at break	ASTM D 882	Strain rate 50% / min	%	MD	120
				TD	80
Elasticity modulus (1% secant)	ASTM D 882	Strain rate 10% / min	MN/m ²	MD	3000
				TD	3600
			lb/in ²	MD	435100
				TD	522100
Sealing range	Innovia Films test	2 secs; 0.10MN/m ² 2 secs; 15 psi	°C	115-140	
			°F	240-285	
Seal strength	Innovia Films test	109°C; 2 secs; 0.10MN/m ² 225°F; 2 secs; 15 psi	g(f)/25mm/ in	500	
Shrinkage	Innovia Films test	60 secs at 80°C (176°F) 60 secs at 120°C (248°F)	%	MD	3.7
				TD	3.5
				MD	7.0
				TD	11.0

MD Machine Direction TD Transverse Direction
All properties are tested under standard laboratory conditions: 23 ± 2°C, 50 ± 5% RH.(73 ± 4F, 50 ± 5% RH), unless otherwise stated. Where relevant, tests are based on international testing standards.
Ref B290 - 1 of 2 - 0120

Propafilm™ GLS

Technical Data Sheet

Reel Specifications

Nominal Reel Diameters

Film	2x Length (metres)
GLS20	3800
GLS25	3000

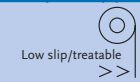

Film	2x Length (feet)
GLS80	12467
GLS100	9843

Other reel lengths are available subject to negotiation.

Outside Diameter	2x	4x	6x	8x	12x
For 77mm / 3in core	330mm 13in	-	-	-	-

Film Winding

Propafilm™ GLS has differential slip properties for maximum wrap tightness. When overwrapping, it is advised to use the low slip surface on the inside of the packs. For conversion, it is recommended to treat the low slip surface which is identified by a symbol on the reel label as below.

Low Slip/Treated Surface	Ordering Code	Label Symbol
Inside	I	
Outside	O	

*For printing application consult an Innovia Films Technical Representative

Film Storage and Handling

No special conditions are required for the storage of Propafilm™ GLS but it is recommended that dry conditions at temperatures below 30°C (86°F) are employed. Propafilm™ GLS is suitable for use for 6 months from the date of delivery and stocks should be used in rotation. Films should be allowed to reach operating room temperatures for 24 hours before use.

Food Contact

Propafilm™ GLS complies with the applicable EU and US legislation for most applications involving direct contact with foods. Full details are given on the Declaration of Compliance. Customers intending to use Propafilm™ GLS in a food contact application should request a copy of this document from Innovia Films. Details of compliance with food contact legislation in non-EU countries are also available upon request.

Health & Safety Guidelines

For Health & Safety information, please refer to literature reference B190.

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B290 – 2 of 2 – 0120

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