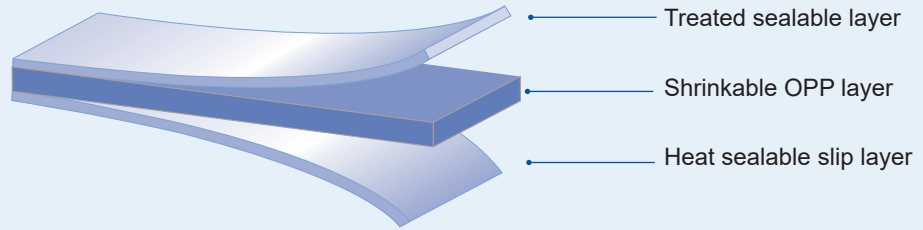


Propafilm™ ZSD

Technical Data Sheet

ZSD - Printable, Transparent, Coextruded OPP film, with Shrink Properties.



Features

- Two-side heat seal capability
- Anti-blocking and anti-static properties
- Excellent tear strength and puncture resistance
- Oil and grease resistant
- Meets FDA approval for use in food packaging applications

Applications

High speed wrapping of individual cigarette hard packs and cartons.



Technical Properties (Typical Values)

Property	Test Method	Test Conditions	Units	ZSD
Thickness	ASTM D4 321		micron	20
			gauge	80
Basic Weight	ASTM D4 321		g/m ²	18.2
			lbs/ream	11.2
Nominal Density	ASTM D4 321		g/cm ³	0.91
Yield	ASTM D4 321		m ² /kg	54.9
			in ² /lb	38,700
Tensile strength	Innovia Films test	200mm/min	N/mm ² MD	180
			N/mm ² TD	290
			lbs/in ² MD	26,100
			lbs/in ² TD	42,050
Elongation at Break	Innovia Films test	200mm/min	% MD	140
			TD	60
CoF	ASTM D 1894	Static / Dynamic		0.25
Surface Tension Print	Innovia Films test			36-39
MVTR	Innovia Films test	38°C (100°F) 90% RH	g/m ² /day	6.0
			g/100in ² /day	0.39
Heat Seal Strength Back- Front	Innovia Films test	140°C/0.35/0.15 secs 284°F/0.5psi/0.15sec	N/15mm	1.8
			g/in	311
Heat Seal Range Back - Front	Innovia Films test	0.35N (0.5psi)/0.15secs	°C (min/max)	120-140
			°F (min/max)	248-284
Shrinkage (production value)	Innovia Films test	5min at 130 °C	% MD	>9
			TD	>9

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.
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Conversion

Treatment and Winding

- One surface treated for printing and/or laminating
- Treated surface wound to outside of reel
- See reel tag about treatment specific to reel

Due to the formulation of this film:

- Do Not Re-treat the surface.
- The ASTM D 2578 standard test may not predict accurately the print performance of the film, showing lower than expected values but printing should not be impaired.

Surface Printing

- Ink recommendations for all print processes are available
- Printing and anti-static properties are guaranteed for 6 months only
- Excellent web flatness permits higher speed printing
- Run appropriate trials prior to production
- Consult your ink supplier!

Conversion note:

- Generally PVB or NC-based inks with adequate adhesion promoter are suitable for printing on this film.
- Drying temperatures should not exceed a web temperature of 170°F (76°C).
- Where static electricity may be generated, use of static eliminators and maintaining a relative humidity >50% is recommended.

Nominal Reel Diameters

Film	1x Length (metres)	3x Length (metres)	6x Length (metres)
ZSD 20	3200	9600	19200

Film	1x Length (feet)	3x Length (feet)	6x Length (feet)
ZSD 80	10499	31496	62992

Outside Diameter	1x	3x	6x
For 77mm 3in core	314mm 12.4in	-	-
For 153mm 6in core	-	544mm 21.4in	749mm 29½in

All reels are wound to length. Actual OD may vary with thickness and winding density variations

Film Storage and Handling

- This film is largely unaffected by climate influences, but it should be stored at temperatures below 100°F (38°C).
- The reels should be kept in their original wrapping until used.
- Innovia films should be placed in the processing area 24 hours prior to processing to acclimatise.
- Innovia films are largely unaffected by climatic conditions but should not be stored at temperatures above 104°F (40°C). Under suitable storage conditions the film can be stored for a period of six months without any risk of deterioration.

Food Contact

FDA approved for direct food contact. Please contact Technical Services for individual "original" FDA Food Contact statements.

Health & Safety Guidelines

MSDS sheets, as well as other product safety documents, are available for our films upon request.

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