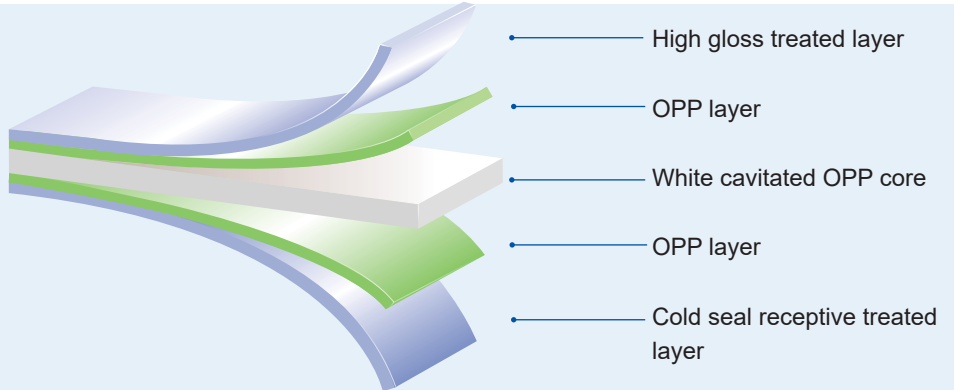


Propafilm™ QHH Plus

Technical Data Sheet

QHH Plus - white opaque, high gloss, cavitated, multi-layer, coextruded OPP film, designed for cold seal applications

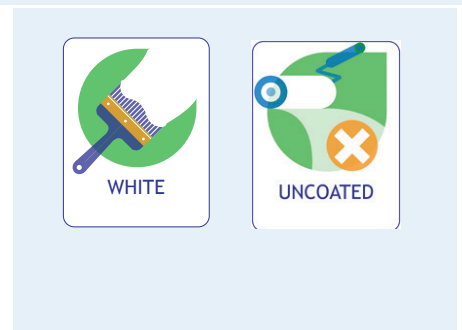


Features

- Yield advantage of 39% vs transparent or solid opaque white films
- Cost savings over cold seal laminations
- Thicker grades for paper replacement
- High z axis strength and stiffness
- Improved MVTR vs competitive films
- Excellent cold seal adhesion

Application

- Cold seal applications
- Horizontal packaging in single web form with reverse cold seal coating
- Horizontal packaging laminated to Innovia Films NHD transparent cold seal release film where z-axis strength is critical



Technical Properties (Typical Values)

Property	Test Method	Test Conditions	Units	QHH Plus			
Thickness	Innovia test method		micron	30	40	50	
			gauge	120	160	200	
Yield	ASTM D 4321		in ² /lb	34,500	26,100	20,700	
			m ² /kg	49.1	37	29.4	
Basis Weight	ASTM D 4321		g/m ³	20.4	27	34	
			lbs/ream	12.5	16.6	20.9	
Nominal density	Innovia test method		g/cm ³	0.73	0.71	0.70	
Gloss	Innovia test method		[20°C]	70	70	70	
Opacity	Innovia test method		%	78	84	86	
Surface tension	ASTM D 2578	Print	mN/m (dyne)	>36	>36	>36	
Breaking load	Innovia test method		lbs/in	MD	15	21	25
				TD	29	46	55
Elongation at break	Innovia test method		%	MD	150	150	150
				TD	40	40	40
MVTR	Innovia test method	38°C (100°F)/90% RH	g/m ² /day	5.5	3.8	3.2	
			g/100in ² /day	0.35	0.25	0.21	

MD Machine Direction TD Transverse Direction
All properties are tested under standard laboratory conditions: 73 ± 4F, 50 ± 5% RH (23 ± 2°C, 50 ± 5% RH) unless otherwise stated. Where relevant, tests are based on international standards. This document is not a product specification and does not guarantee any specific product attributes. Any existing commercial rights or patents must be observed.
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Propafilm™ QHH Plus

Technical Data Sheet

Conversion

Treatment and Winding	Surface Printing
One surface treated for printing and/or laminating	Ink recommendations for all print processes are available
Treated surface wound to outside of roll	Printing and anti-static properties guaranteed for 6 months only
See roll tag about treatment specific to roll	Excellent web flatness permits higher speed printing
	Run appropriate trials prior to production
	Consult your ink, coating or adhesive supplier

Conversion Note -

Generally PVB or NC-based inks with adequate adhesion promoter are suitable for printing on the 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. Excellent sealing strength and anchorage with most cold seal adhesives. The results may vary depending on type and application so consult your coating supplier. Usually laminated to Innovia's NHD cold seal release film via solvent-based or solvent-less adhesives.

Nominal Reel Diameters

Film	Length (metres)			
QHH Plus 30	2,680	8,040	16,080	24,120
QHH Plus 40	1,975	5,925	11,850	17,775
QHH Plus 50	1,540	4,620	9,240	13,680
Film	Length (feet)			
QHH Plus 120	8,793	26,378	52,756	79,134
QHH Plus 160	6,480	19,439	38,878	58,317
QHH Plus 200	5,052	15,157	30,315	45,472
Outside Diameter	1x	3x	6x	9x
For 3in / 77mm core	13.0" (in) 330mm	-	-	-
For 6in / 153mm core	-	22.7" (in) 576mm	31.3" (in) 796mm	38.0" (in) 967mm

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

Film Storage and Handling

The films should be placed in the processing area 24 hours prior to processing, to acclimatise. The 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 6 months without any risk of deterioration.

Food Contact

Propafilm™ QHH Plus is FDA approved for food contact. Please contact Technical Services for other 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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