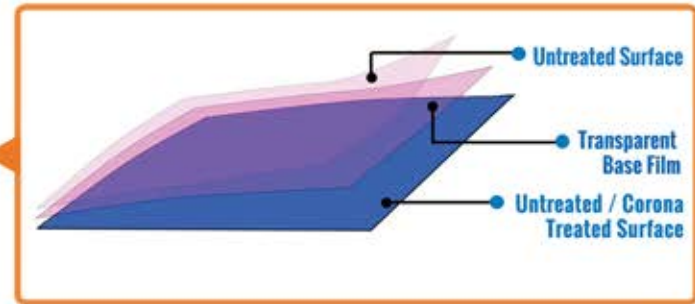


# F-HPF Puncture Resistant/Nylon Replacement BOPET Film

## Process Overview

**F-HPF** is a new type of **nylon replacement film** made with a newly developed proprietary technology.

This film **offers good thermoforming performance, high puncture resistance and flexural fatigue strength suitable** for many applications formerly only able to be filled with **bi-axially oriented nylon (BON) film**.



## Superior to Nylon

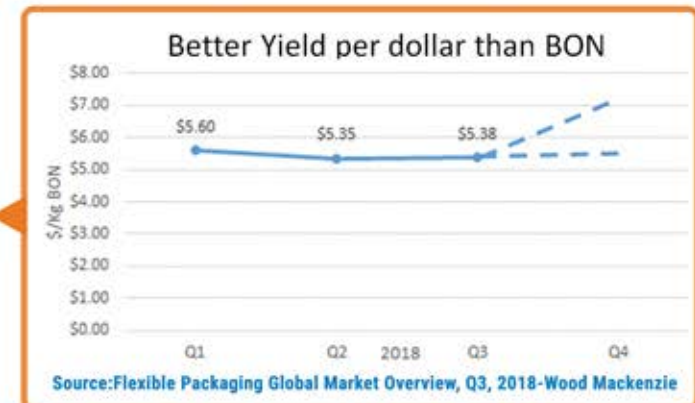
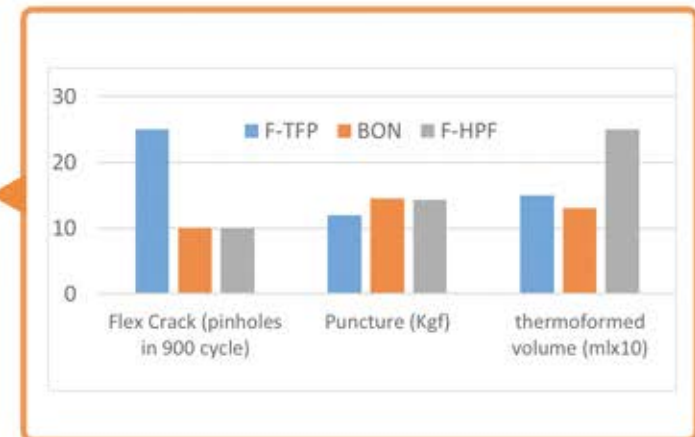
- Puncture matches BON
- Flex Crack matches BON
- Thermoforming better than BON

## Benefits to Customer

- Fewer pinholes due to better flexibility
- Enhanced puncture and crack resistance
- Lower cost per unit area than BON

## Much Better Web Handling

- Does not absorb moisture like BON
- Superior winding and roll quality to BON
- Less Prone to static build up and discharge than BON
- Compatible with a wider range of inks than BON



## Value Proposition

### Key Features

- Excellent thermoformability than BON
- Much better availability/lead time than BON
- Increased yield and reduced costs
- FDA compliant for a wide range of uses

### Applications

- Cheese and Dairy Products
- Meat/processed meat (bacon, salami)
- Brick Packaging
- Fresh and frozen foods
- Robust/burst resistant bags

**DISCLAIMER :-** It is responsibility of our customer to determine that their use of our product (s) is safe, lawful, and technically suitable in their intended applications. The values given in the process data sheet represent typical performance based on the best of our knowledge as on date when the process data sheet was compiled. The user is solely responsible for the end use of the product and needs to perform their own test to confirm the product suitability / compatibility in all respects. Flex Films gives no warranty or accept liability for any loss and fitness of the product for any specific purpose. Flex Films reserves the right to change the process data sheet at any time for enhancing the quality of the performance without prior information unless otherwise.

**Product Description:**

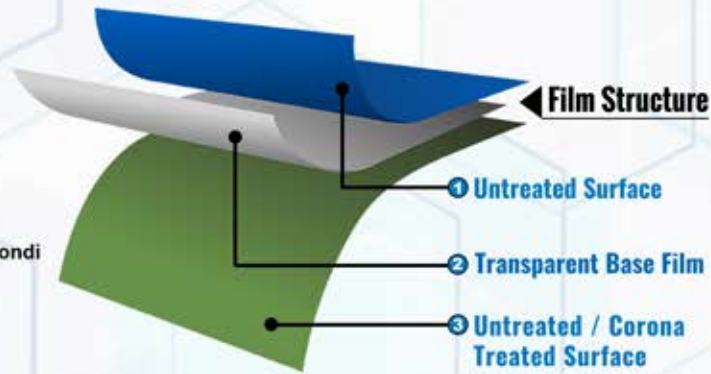
- > F-HPF is a transparent polyester film
- > The film is either both sides Untreated or one side Untreated with other side Corona Treated

**Application:**

- > Vacuum brick, deli meat / cheese
- > Puncture and crack resistant packages
- > Withstands aggressive handling

**Key Features:**

- > Drop-In replacement for bi-axially oriented nylon in many applications
- > High Clarity
- > Corona Treatment improves bondi



PROPERTIES	TEST METHOD (ASTM)	UNIT					
THICKNESS	Internal	Micron	15	19	23	50	
		(Gauge)	60	76	92	200	
YIELD		m <sup>2</sup> /kg	47.62	37.59	31.05	14.28	
		in <sup>2</sup> /lb.	33550	26483	21876	10060	
SURFACE TENSION (min) (Corona Treated surface)	D-2578	Dyne/cm	52				
COF (max) (Untreated to Untreated) (Untreated to Corona Treated)	D-1894	-	0.50	0.50	0.50	0.45	
			0.45	0.45	0.45	0.40	
HAZE (max)	D-1003	%	4.0	4.0	4.0	6.0	
TENSILE STRENGTH AT BREAK (min)	D-882	Kg/cm <sup>2</sup>	MD	1700	1700	1600	1600
			TD	2400	2500	2500	2500
		(Psi)	MD	24500	24500	23000	23000
			TD	35000	36000	36000	36000
ELONGATION AT BREAK (min)		%	MD	175	200	200	200
			TD	100	100	100	100
LINEAR SHRINKAGE (max) (30 Minute at 150°C)	D-1204	%	MD	8.5	8.0	7.0	7.0
			TD	5.0	4.5	4.5	4.0
MVTR (typical) (38°C & 90%RH)	F-1249	gm/m <sup>2</sup> /day	40	35	30	16	
		(gm/100in <sup>2</sup> /day)	2.6	2.3	2.0	1	
OTR (typical) (23°C & 0%RH)	D-3985	cc/m <sup>2</sup> /day	110	90	80	45	
		(cc/100in <sup>2</sup> /day)	7.2	5.8	5.2	2.9	

# The inherent surface tension of the untreated side of any PET film is a minimum of 42 dyne/cm.

**STORAGE & HANDLING**

FLEXPET™ needs to be stored in a warehouse below 35°C (95°F) and should not be exposed to direct sunlight, bright light sources, or high humidity. If the material is stored in the recommended conditions, FLEXPET™ is suitable for use within 270 days from the date of shipment.

**FOOD CONTACT**

FLEXPET™ complies with EU and FDA regulations on plastic materials used for food grade applications. Specific documents and SDS are available on request.

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