

# 140LFS PF DIRECT THERMAL

Specifications may change without notice.  
Last Update: June 2026 (Rev. 1)



## PRODUCT FEATURES

140LFS PF is a phenol-free alternative to the standard 140LFS formulation. It is a high sensitivity polypropylene direct thermal film stock with a 3.1 mil base film thickness, designed for applications requiring exceptional durability and high-quality imaging. Its tear and water-resistant base film ensures reliable performance in demanding environments, making it ideal for applications such as meat processing labels, laboratory labels, shelf tags, and weigh scale labels.

## APPLICATION AREAS

- Airline Baggage Tags
- Meat Processing
- Wristbands
- Laboratory Labels
- Shelf Tags
- Weigh Scale Labels
- Product ID

## FACESTOCK PROPERTIES

### Basis Weight

lbs (24 x 36 x 500 sheets)	38.7 ± 4.0
g/sq m	63 ± 6.3

### Caliper

mil	3.1 ± 0.3
µm	80 ± 8

**Image Density (ODU Minimum)** 1.25

**Tensile Strength (kgf/15 mm Minimum)**

MD	15.0
CD	25.0

### Stiffness (gf-cm Minimum)

MD	4.5
CD	8.5

### Initial Activation Temperature

(°F / °C)	
O.D. = 0.2	212°F / 100°C


### Effective Activation Temperature


(°F / °C)	
O.D. = 0.8	239°F / 115°C


## CERTIFICATIONS


- Indirect Food Contact
- ISO9001
- ISO14001

## REGULATORY

 Phenol Free

 BPS Free

 BPA Free

 No Added PFAS

## PRESERVATION PROPERTIES

### Oil Resistance

Image	1.20 Minimum
Background	0.15 Maximum
Test Method	40°C, Dry, 15 Hrs, X-Rite (ODU)

### Moisture Resistance

Image	1.20 Minimum
Background	0.15 Maximum
Test Method	40°C, 90% RH, 24 Hrs, X-Rite (ODU)

### Heat Resistance

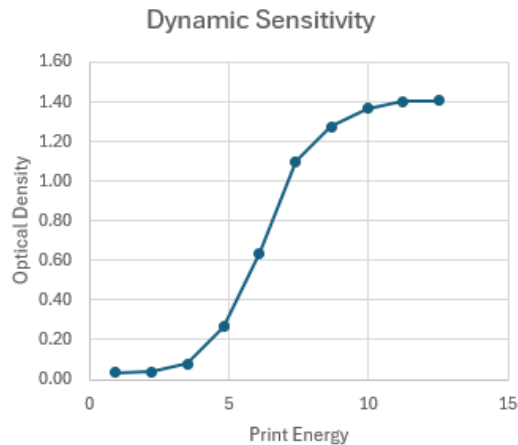
Image	1.20 Minimum
Background	0.20 Maximum
Test Method	70°C, Dry, 24 Hrs, X-Rite (ODU)

### Water Resistance

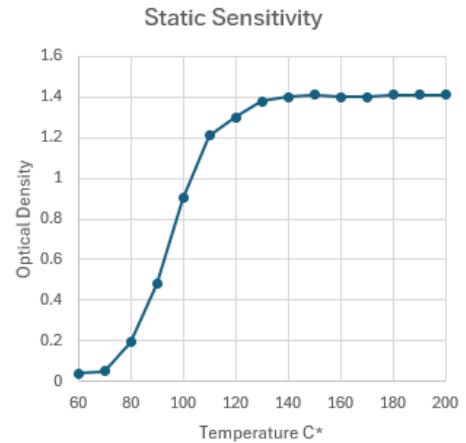
Image	1.00 Minimum
Background	0.12 Maximum
Test Method	Water Immersion, 15 Hrs, X-Rite (ODU)

# 140LFS PF DIRECT THERMAL SENSITIVITY RESULTS

## DYNAMIC SENSITIVITY



## STATIC SENSITIVITY



Sensitivity curves for reference only. Storage Conditions: Below 95°F (35°C) and less than 85% R.H. in a warehouse, avoiding direct sunlight. Dynamic sensitivity tests performed on Markpoint MP104.

## LINER AND ADHESIVE PROPERTIES

**Liner:** 40 lbs (24 x 36 x 500)

**Caliper:** 2.4 mils ± 10% (61 ± 6µm)

**Opacity:** 65% Maximum (Photovolt)

**G12 Adhesive:** Wide Temperature and Permanent

## LAMINATED PRODUCT PROPERTIES

### Application Temperature

°F

### G12

-40 to 122

°C

-40 to 50

### Service Temperature

°F

-65 to 131

°C

-54 to 55

### Basis Weight (24 x 36 x 500)

lbs

89 ± 9

g/sq m

144 ± 14

### Caliper

mil

4.72 ± 0.5

µm

120 ± 12

## CONTACT US

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