

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

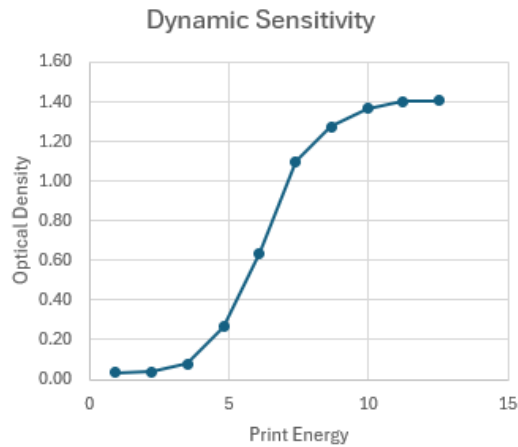
Image	1.20 Minimum
Background	0.20 Maximum
Test Method	70°C, Dry, 24 Hrs, X-Rite (ODU)

Water Resistance

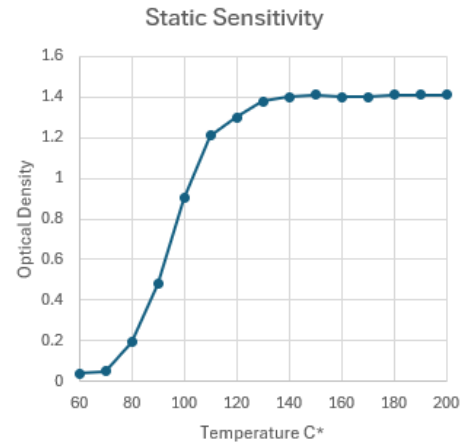
Image	1.00 Minimum
Background	0.12 Maximum
Test Method	Water Immersion, 15 Hrs, X-Rite (ODU)

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)

G12 Adhesive: Wide Temperature and Permanent

Caliper: 2.4 mils ± 10% (61 ± 6µm)

Opacity: 65% Maximum (Photovolt)

LAMINATED PRODUCT PROPERTIES

Application Temperature

	G12
°F	-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	6.4 ± 0.7
µm	163 ± 17

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