

N140 PF DIRECT THERMAL

Specifications may change without notice.
Last Update: September 2026 PS-2403 (Rev.6)

PRODUCT FEATURES

N140PF is a phenol-free alternative to the N140LA formulation, featuring high-sensitivity, top-coated direct thermal label stock with G12 and G25 all-temperature permanent adhesives. Designed for demanding applications like weigh scale and shipping labels, meat processing, and product identification, it ensures excellent image preservation and reliable performance across various environments.

APPLICATION AREAS

- Weigh Scale Labels
- Shipping Labels
- Meat Processing
- Distribution and Inventory
- Product ID

FACESTOCK PROPERTIES

Basis Weight

lbs (24 x 36 x 500 sheets)	43.6 ± 4.3
g/sq m	71 ± 7

Caliper

mil	3.0 ± 0.3
µm	76 ± 7

Image Density (ODU Minimum)

1.25

Tear Strength (gf Minimum)

MD	30
CD	35

Tensile Strength (kgf/15 mm Minimum)

MD	5.4
CD	2.7

Stiffness (g-cm Minimum)

MD	3.0
CD	2.5

Initial Activation Temperature (°F / °C)

O.D. = 0.2	212°F / 100°C
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Effective Activation Temperature (°F / °C)

O.D. = 0.8	239°F / 115°C
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CERTIFICATIONS

- Indirect Food Contact
- ISO9001
- ISO14001

REGULATORY



Phenol Free



BPS Free



BPA Free



No Added PFAS

PRESERVATION PROPERTIES

Oil Resistance

Image	1.10 Minimum
Background	0.15 Maximum
Test Method	40°C, Dry, 15 Hrs, X-Rite (ODU)

Moisture Resistance

Image	1.10 Minimum
Background	0.12 Maximum
Test Method	40°C, 90% RH, 24 Hrs, X-Rite (ODU)

Heat Resistance

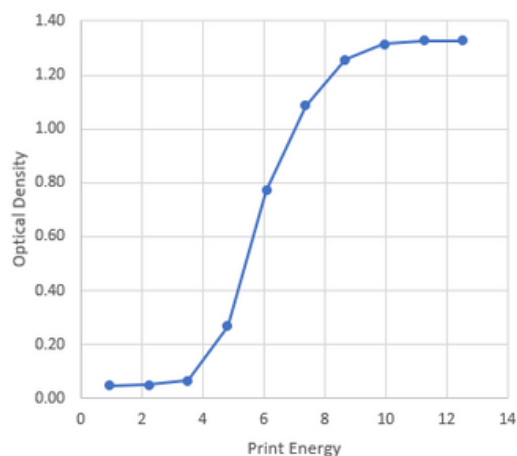
Image	1.10 Minimum
Background	0.30 Maximum
Test Method	80°C, Dry, 1 Hr, X-Rite (ODU)

Light Resistance

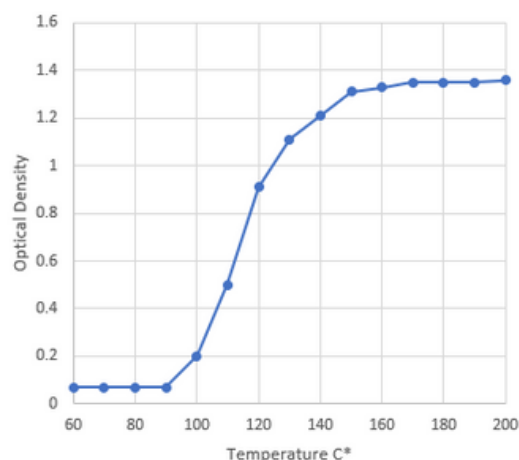
Image	1.10 Minimum
Background	0.15 Maximum
Test Method	5000 lx, 100 Hrs, X-Rite (ODU)

N140 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

Caliper: 2.4 mils $\pm$ 10% ($61 \pm 6\mu\text{m}$)

Liner: 40 lbs (24 x 36 x 500)

Opacity: 65% Maximum (Photovolt)

G12/25 Adhesive: Wide Temperature and Permanent

G8 Adhesive: Tight Removable

G12H Adhesive: Wide Temperature and Permanent

G22 Adhesive: Hot Melt

LAMINATED PRODUCT PROPERTIES

Application Temperature	G12 / G25	G8	G12H	G22
°F	-40 to 122	10 to 120	-40 to 122	28 to 120
°C	-40 to 50	-12 to 49	-40 to 50	-2 to 50
Service Temperature				
°F	-65 to 131	-20 to 120	-65 to 131	-40 to 122
°C	-54 to 55	-29 to 49	-54 to 55	-40 to 50
Basis Weight (24 x 36 x 500)				
lbs	98 $\pm$ 12	95 $\pm$ 12	99 $\pm$ 11	101 $\pm$ 12
g/sq m	160 $\pm$ 19	154 $\pm$ 19	161 $\pm$ 18	164 $\pm$ 19
Caliper				
mil	6.0 $\pm$ 0.7	5.9 $\pm$ 0.7	6.0 $\pm$ 0.7	6.2 $\pm$ 0.7
μm	152 $\pm$ 18	151 $\pm$ 18	153 $\pm$ 18	157 $\pm$ 18

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