



SPECIFICATION SHEET

This product specification sheet provides the detail to aid you in identifying the most appropriate product type to meet your company's specific requirements.
Please direct questions to: **Ricoh Customer Service 1-800-843-7058**

DESCRIPTION

135WRx is a medium sensitivity polypropylene direct thermal film stock with image durability that resists solvents and a durable base film for tear resistance.

KEY FEATURES

Medium sensitivity, moderate image preservation properties; resistant to medical solutions; durable polypropylene base film that is tear and water resistant.

— APPLICATION AREAS —



Laboratory Labels



Wristbands



Medical



Shelf Tags



Industrial

FACESTOCK / PRESERVATION PROPERTIES

FACESTOCK PROPERTIES

ITEM		UNIT	SPECIFICATION	TEST METHOD
Basis Weight		lbs (24x36x500 sheets)	30.7 ± 4.9	TAPPI T-410
		g/m2	50 ± 8.0	
Caliper		mil	2.6 ± 0.3	TAPPI T-411
		µm	65 ± 9.0	
Image Color			Black	Visual Check
Image Density	(ODU)	Minimum	1.25	X-Rite Densitometer
Tensile Strength	MD	kgf/15 mm Minimum	3.8	TAPPI T-494
	CD	kgf/15 mm Minimum	10.0	
Stiffness	MD	gf-cm Minimum	0.98	TAPPI T-489
	CD	gf-cm Minimum	1.76	
Initial Activation Temperature	(O.D. = 0.2)	°F / °C	212 / 100	
Effective Activation Temperature	(O.D. = 0.8)	°F / °C	257 / 118	

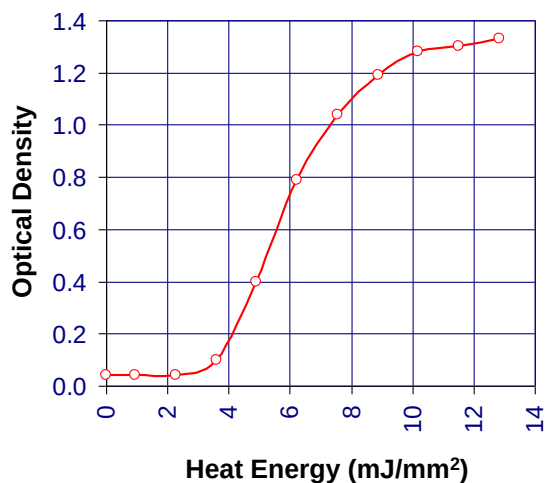
PRESERVATION PROPERTIES

ITEM		SPECIFICATION	TEST METHOD
Water Resistance	Image	1.10 Minimum	Water Immersion 15 Hours
	Background	0.12 Maximum	
Oil Resistance	Image	1.10 Minimum	40° C, Dry, 15 Hours X-Rite (ODU)
	Background	0.15 Maximum	
Moisture Resistance	Image	1.10 Minimum	40° C, 90% RH, 24 Hours X-Rite (ODU)
	Background	0.15 Maximum	
Heat Resistance	Image	1.10 Minimum	80° C, Dry, 1 Hour X-Rite (ODU)
	Background	0.30 Maximum	
Light Resistance	Image	1.10 Minimum	5000 lx, 100 Hours X-Rite (ODU)
	Background	0.15 Maximum	

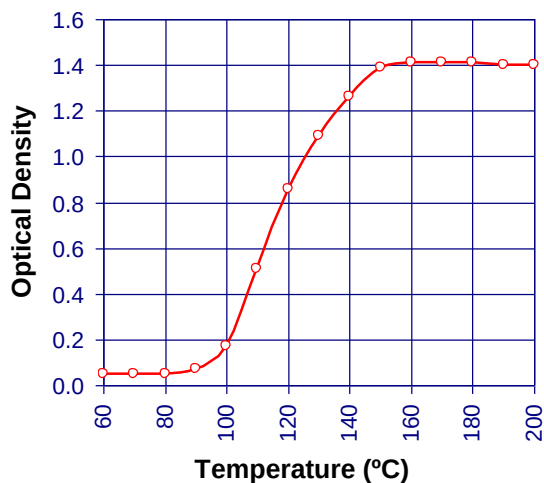


SENSITIVITY RESULTS

Dynamic Sensitivity



Static Sensitivity



Sensitivity curves are for reference only.

Storage Conditions: Below 95°F (35° C) and less than 85% R.H. in a warehouse, avoiding direct sunlight.

Tests performed on Markpoint MP104.

135WRx-60 – LAMINATED PRODUCT

GRADE	UNIT	G12
Application	°F	-40 to 122
Temperature	°C	-40 to 50
Service	°F	-65 to 131
Temperature	°C	-54 to 55
Basis Weight	lbs	80 ± 11
(24 x 36 x 500)	g/m ²	131 ± 18
Caliper	µm	139 ± 21
	mil	5.5 ± 0.8

Liner: 42 lbs

Caliper: 2.5 mils ± 10% (64 ± 8 µm)

Opacity: 65% Maximum (Photovolt)

Adhesive Attributes:

G12 – Wide Temperature and Permanent

CERTIFICATES / REGULATIONS / DIRECTIVES

BPA Free	RoHS	ISO9001	Indirect Food Contact
REACH	WEEE	ISO14001	

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 ISO14001 / ISO9001 Certified

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SPECIFICATION SHEET

This product specification sheet provides the detail to aid you in identifying the most appropriate product type to meet your company's specific requirements.
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DESCRIPTION

Ricoh's 140LDS is a high sensitivity polypropylene direct thermal film stock with high image durability against most environments.

KEY FEATURES

High sensitivity, high image preservation properties; durable polypropylene base film that is tear and water resistant.

— APPLICATION AREAS —



Produce Labels

Meat Processing

Wristbands

Laboratory Labels

Shelf Tags

Weigh Scale Labels

Product ID

FACESTOCK / PRESERVATION PROPERTIES

FACESTOCK PROPERTIES

ITEM		UNIT	SPECIFICATION	TEST METHOD
Basis Weight		lbs (24x36x500 sheets)	33.2 ± 4.9	TAPPI T-410
		g/m2	54.0 ± 8.0	
Caliper		mil	2.6 ± 0.3	TAPPI T-411
		µm	65.0 ± 9.0	
Image Color			Black	Visual Check
Image Density	(ODU)	Minimum	1.30	X-Rite Densitometer
Tensile Strength	MD	kgf/15 mm Minimum	9.0	TAPPI T-494
	CD	kgf/15 mm Minimum	15.0	
Stiffness	MD	gf-cm Minimum	0.98	TAPPI T-489
	CD	gf-cm Minimum	1.76	
Initial Activation Temperature	(O.D. = 0.2)	°F / °C	212 / 100	
Effective Activation Temperature	(O.D. = 0.8)	°F / °C	239 / 115	

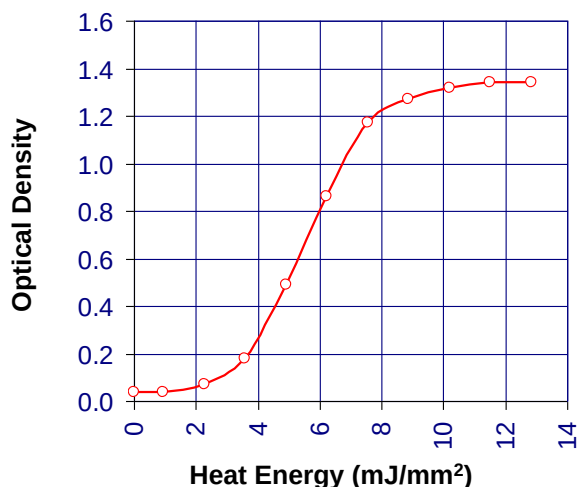
PRESERVATION PROPERTIES

ITEM		SPECIFICATION	TEST METHOD
Oil Resistance	Image	1.20 Minimum	40°C, Dry, 15 Hours X-Rite (ODU)
	Background	0.15 Maximum	
Moisture Resistance	Image	1.20 Minimum	40°C, 90% RH, 24 Hours X-Rite (ODU)
	Background	0.15 Maximum	
Heat Resistance	Image	1.20 Minimum	70°C, Dry, 24 Hours X-Rite (ODU)
	Background	0.20 Maximum	
Water Resistance	Image	1.00 Minimum	Water Immersion, 15 Hours X-Rite (ODU)
	Background	0.12 Maximum	

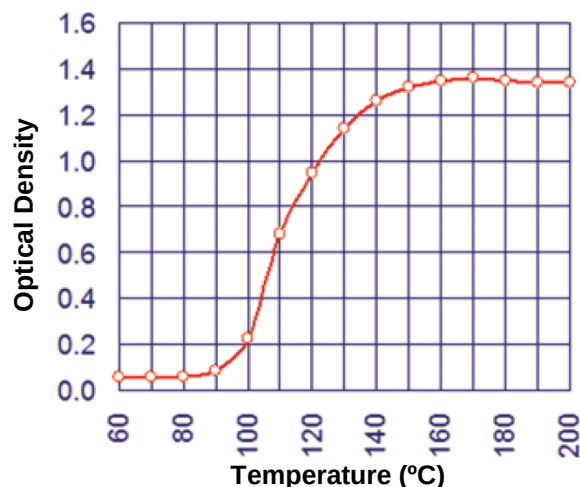


SENSITIVITY RESULTS

Dynamic Sensitivity



Static Sensitivity



Sensitivity curves are for reference only.

Storage Conditions: Below 95°F (35° C) and less than 85% R.H. in a warehouse, avoiding direct sunlight.

Tests performed on Markpoint MP104.

140LDS – LAMINATED PRODUCT

GRADE	UNIT	G8	G12	G29
Application	°F	10 to 120	-40 to 122	-40 to 122
Temperature	°C	-12 to 49	-40 to 50	-40 to 50
Service	°F	-20 to 120	-65 to 131	-65 to 131
Temperature	°C	-29 to 49	-54 to 55	-54 to 55
Basis Weight	lbs	84 ± 11	83 ± 12	80 ± 12
(24 x 36 x 500)	g/m ²	137 ± 18	136 ± 19	130 ± 19
Caliper	µm	140 ± 22	140 ± 22	138 ± 22
	mil	5.5 ± 7.0	5.5 ± 7.0	5.4 ± 7.0

Liner: 42 lbs

Caliper: 2.5 mils ± 10% (64 ± 8 µm)

Opacity: 65% Maximum (Photovolt)

Adhesive Attributes:

G8 – Tight Removable

G29 – Washable

G12 – Wide Temperature and Permanent

CERTIFICATES / REGULATIONS / DIRECTIVES

BPA Free

RoHS

ISO9001

Indirect Food Contact

REACH

WEEE

ISO14001

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