

# B110A

(For Flat Head Printers)

# RICOH

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## Thermal Transfer Ribbon Product Information

### WAX-RESIN SMEARLESS

Other colors available: **B210A (Blue)** and **B310A (Red)**

Last update:  
Apr. 2017  
Ref: PS-1698 (Rev. 2)

#### RIBBON PROPERTY

- Base Material
- Base Thickness (µm)

Polyester film  
4.5 ± 0.4

#### INK PROPERTY

- Ink Color
- Ink Transparency

Black  
Min. 1.2

#### PRINTING PROPERTY

- Image Density (check w/ X-Rite)
- ANSI Grade

Min. 1.25  
Min. Vertical Bar ANSI 2.0 C

#### IMAGE PROPERTY

- Scratch Resistance (Times)
- Light Resistance
- Water Resistance

Min. 100  
Min. ANSI 2.0 C  
Min. ANSI 2.0 C

*\* All tests specifications are based on Ricoh's standard test methods.*

#### USAGE ENVIRONMENT:

5 ~ 35°C (41 ~ 95°F), 30 ~ 85%RH

#### STORAGE CONDITIONS:

Keep indoors, away from high temperatures, high humidity and direct sunlight. Keep master rolls hanging horizontally.

#### GUARANTEE PERIOD:

2 years after manufacturing.

#### FEATURES:

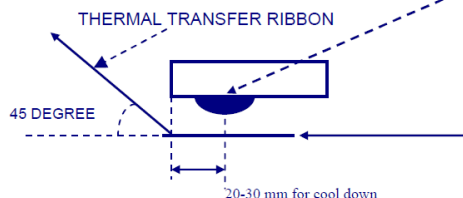
- All purpose wax/resin TTR
- Prints on wide variety of media
- High resistance to smearing & chemicals
- Reliable, sharp-edge print quality
- Maximizes barcode scanning rates
- Minimizes static electricity & ink flaking problems

### Ribbon Selection Tips

For Flat type thermal print head

B110A is recommended

NORMAL TYPE THERMAL PRINT HEAD

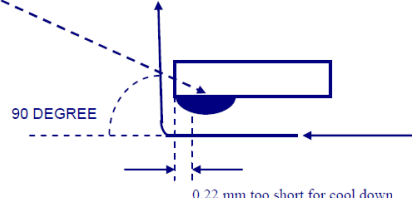


*Ink from Ribbon has adequate cooling time before ribbon is peeled from substrate.*

For Near edge type thermal print head

B120E is recommended

NEAR EDGE TYPE THERMAL PRINT HEAD



*Near-Edge Head technology requires a different type of ribbon that can transfer ink before cooling down.*

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# B110C

(For Flat Head Printers)

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## Thermal Transfer Ribbon Product Information

Last update:  
Aug. 2016  
Ref: PS-1102 (Rev. 1)

### RESIN SUPER SMEARLESS

#### RIBBON PROPERTY

- Base Material Polyester film
- Base Thickness ( $\mu\text{m}$ )  $4.5 \pm 0.4$

#### INK PROPERTY

- Ink Color Black
- Transmission Density Min. 0.65

#### IMAGE PROPERTY

- Scratch Resistance (times) Min. 1850
- Light Resistance (ANSI) Min. 3.5 A
- Water Resistance (ANSI) Min. 3.5 A
- Chemical Resistance (times)

|            | <WHITE PET> | <SILVER PET> |
|------------|-------------|--------------|
| Ethanol    | Min. 150    | Min. 1000    |
| Kerosene   | Min. 100    | Min. 2000    |
| Engine Oil | Min. 2000   | Min. 2000    |
| Gasoline   | Min. 160    | Min. 1000    |
| Hexane     | Min. 1500   | Min. 2000    |

\* All tests specifications are based on Ricoh's standard test results.

#### USAGE ENVIRONMENT:

5 ~ 35°C (41 ~ 95°F), 30 ~ 85%RH

#### STORAGE CONDITIONS:

Keep indoors, away from high temperatures, high humidity and direct sunlight. Keep master rolls hanging horizontally.

#### GUARANTEE PERIOD:

- \*Finished rolls: 2 years after manufacturing
- \*Master rolls: 1 year after coating

#### FEATURES:

- High sensitivity for high-speed printing (~4 inches/sec.) with high printing quality assured
- Super smear resistance at temperatures up to 100°C (212°F)
- Superior resistance to solvents (alcohol, petrol, kerosene, brake fluid, engine oil, car wax, etc.)
- Special back coating for reliable and superior matching with thermal print head
- UL recognized with various printers and films

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# B110CR

(For Flat Head Printers)

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## Thermal Transfer Ribbon Product Information

### RESIN SUPER SMEARLESS

Last update:  
Aug. 2016  
Ref: PS-1659 (Rev. 1)

#### RIBBON PROPERTY

- Base Material
- Base Thickness ( $\mu\text{m}$ )

Polyester film  
4.5  $\pm$  0.4

#### INK PROPERTY

- Ink Color

Black

#### IMAGE PROPERTY

- Image Density
- Image Resolution
- Scratch Resistance
- Chemical Resistance
- Ethanol, Methanol
- IPA (Isopropyl Alcohol)
- Windshield Washer
- Gasoline, Diesel Fuel, Gasohol
- Engine Oil, Mission Fluid
- Power Steering Fluid
- Brake Fluid
- Engine Coolant

1.5 minimum  
Excellent  
Excellent  
Excellent  
Excellent  
Excellent  
Excellent  
Excellent  
Excellent  
Excellent  
Excellent  
Excellent

*\* All tests specifications are based on Ricoh's standard test results.*

#### USAGE ENVIRONMENT:

5 ~ 35°C (41 ~ 95°F), 30 ~ 85%RH

#### STORAGE CONDITIONS:

Keep indoors, away from high temperatures, high humidity and direct sunlight. Keep master rolls hanging horizontally.

#### GUARANTEE PERIOD:

- \*Finished rolls: 2 years after manufacturing
- \*Master rolls: 1 year after coating

#### FEATURES:

- Ideal for Automotive, Serial No. Plates, Circuit Board Labels and Pharmaceutical Applications
- Produces very high resolution even when printing using a 600dpi thermal head
- Excellent resistance to heat, chemicals, solvents and scratches
- UL recognized with various printers and films

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# B110CU

(For Flat Head Printers)

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## Thermal Transfer Ribbon Product Information

### RESIN SUPER SMEARLESS

Last update:  
Aug. 2016  
Ref: PS-1384 (Rev. 1)

#### RIBBON PROPERTY

- Base Material
- Base Thickness ( $\mu\text{m}$ )

Polyester film  
4.5  $\pm$  0.4

#### INK PROPERTY

- Ink Color

Black

#### IMAGE PROPERTY

- Image Density
- Image Resolution
- Scratch Resistance (scratched x 100 by sharp edge at 40°)
- Resistance to smear and heat (rubbed x 100 in 100°C)
- Chemical Resistance (wiped x 100 with cotton cloth at 100gf/cm<sup>2</sup>)
  - Ethanol, Methanol
  - IPA (Isopropyl Alcohol)
  - MEK (Methyl Ethyl Ketone)
  - Thinner
  - Xylene
  - Brake Fluid
  - Water

1.5 minimum  
Excellent  
Excellent  
Excellent  
Excellent  
Excellent  
Excellent  
Excellent  
Excellent  
Excellent

*\* All tests specifications are based on Ricoh's standard test results.*

#### USAGE ENVIRONMENT:

5 ~ 35°C (41 ~ 95°F), 30 ~ 85%RH

#### STORAGE CONDITIONS:

Keep indoors, away from high temperatures, high humidity and direct sunlight. Keep master rolls hanging horizontally.

#### GUARANTEE PERIOD:

- \*Finished rolls: 2 years after manufacturing
- \*Master rolls: 1 year after coating

#### FEATURES:

- Ideal for Automotive, Serial No. Plates, Circuit Board Labels and Pharmaceutical Applications
- Produces very high resolution even when printing using a 600dpi thermal head
- Excellent resistance to heat, chemicals, solvents and scratches
- UL recognized

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# B120E

(For Near Edge Head Printers)

## Thermal Transfer Ribbon Product Information

### WAX-RESIN SMEARLESS

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Last update:  
Aug. 2016  
Ref: PS-1773 (Rev. 1)

#### RIBBON PROPERTY

- Base Material Polyester film
- Base Thickness ( $\mu\text{m}$ )  $4.5 \pm 0.4$

#### INK PROPERTY

- Ink Color Black
- Ribbon Transparency Min. 0.65

#### PRINTING PROPERTY

- Image Density Min. 1.5
- Image Resolution Min. Horizontal Bar ANSI B

#### IMAGE PROPERTY

- Friction Resistance Min. Vertical Bar ANSI A
- Scratch Resistance (Times) Min. 200 (cast coated paper, white PET)
- Light Resistance Min. Vertical Bar ANSI A
- Water Resistance Min. Vertical Bar ANSI A
- Ironing Resistance No image disorder or transfer of ink

*\* All tests specifications are based on Ricoh's standard test methods.*

#### USAGE ENVIRONMENT:

5 ~ 40°C (41 ~ 104°F), 10 ~ 95%RH

#### STORAGE CONDITIONS:

Keep indoors, away from high temperatures, high humidity and direct sunlight. Keep master rolls hanging horizontally.

#### GUARANTEE PERIOD:

2 years after manufacturing.

\*Finished rolls: -20-40°C, 10-90%RH

\*Master rolls: 35°C, 85% RH or less

#### GUARANTEE PERIOD:

\* Finished rolls:

2 years after manufacturing

\* Master rolls:

1 year after coating

#### FEATURES:

- All purpose wax/resin TTR
- Prints on wide variety of media
- High resistance to smearing & chemicals
- Excellent at high-speed printing as high as 10 inches/sec.
- Reliable, sharp-edge print quality
- Maximizes barcode scanning rates
- Minimizes static electricity & ink flaking problems

*The above data represents product averages, allowing for industry accepted variances. These products should be tested in the end-use conditions to ensure that they meet the requirements of the specific application. Specifications may change without notice.*

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# B120HS

(For Flat Head Printers)

## Thermal Transfer Ribbon Product Information

### RESIN SPECIALTY

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Last update:  
Aug. 2016  
Ref: PS-1385 (Rev. 1)

#### RIBBON PROPERTY

- Base Material Polyester film
- Base Thickness ( $\mu\text{m}$ )  $4.5 \pm 0.4$

#### INK PROPERTY

- Ink Color Black
- Ink Transparency Min. 1.2

#### PRINTING PROPERTY

- Image Density Min. 1.5
- Thermo Sensitivity Min. 0.38mj/dot
- Image Resolution Readable without ink smearing

#### IMAGE PROPERTY

- Scratch Resistance (Times) Min. 25
- Oil Resistance Min. ANSI 2.0 C
- Water Resistance Min. ANSI 2.0 C
- Preservability in cold storage Min. ANSI 2.0 C

*\* All tests specifications are based on Ricoh's standard test methods.*

#### USAGE ENVIRONMENT:

5 ~ 35°C (41 ~ 95°F), 30 ~ 85%RH

#### STORAGE CONDITIONS:

Keep indoors, away from high temperatures, high humidity and direct sunlight. Keep master rolls hanging horizontally.

#### GUARANTEE PERIOD:

- \*Finished rolls: 2 years after manufacturing
- \*Master rolls: 1 year after coating

#### FEATURES:

- Excellent when printing on general wrapping polypropylene
- Superior resistance to oils and water and preservability in cold storage environments
- High sensitivity which can be used for high-speed printers
- Excellent image quality

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# B130ED

(For Near Edge Printers)

## Thermal Transfer Ribbon Product Information

**WAX-RESIN SMEARLESS (For Date Coding)**

Last update:  
Jan. 2017  
Ref: PS-2100 (Rev. 1)

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### RIBBON PROPERTY

- Base Material
- Base Thickness ( $\mu\text{m}$ )

Polyester film  
4.5  $\pm$  0.4

### INK PROPERTY

- Ink Color

Black

### IMAGE PROPERTY

- Image Density (transmission)
- Receiving materials (packaging film)

Min. 1.2 (nylon)  
OPP, PE, PET, Nylon

### IMAGE DURABILITY

- Friction Resistance
- Scratch Resistance (times)
- Light Resistance
- Water Resistance

Readable  
Min. 500  
No image disorder  
No image disorder

*\*All tests specifications are based on Ricoh's standard test methods.*

### USAGE ENVIRONMENT:

10 ~ 35°C (50 ~ 95°F), 10 ~ 95%RH

### STORAGE CONDITIONS:

Keep indoors, away from high temperatures, high humidity and direct sunlight. Keep master rolls hanging horizontally.

\* Finished rolls: -20-40°C, 10-90% RH

\* Master rolls: 35°C, 85% RH or less

### GUARANTEE PERIOD:

\*Finished rolls:

4 years after manufacturing

\*Master rolls:

1 year after coating

### FEATURES:

- Printing for various films, such as Polypropylene & Polyethylene
- Super high-speed printing (up to 24 inches/sec)
- High image density
- For near-edge printers

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## Thermal Transfer Ribbon Product Information

Last update:  
Aug. 2016  
Ref: PS-1794 (Rev. 2)

### RESIN SPECIALTY (For Textile Applications)

#### RIBBON PROPERTY

- Base Material Polyester film
- Base Thickness ( $\mu\text{m}$ )  $4.5 \pm 0.4$

#### INK PROPERTY

- Ink Color Black
- Ink Transparency More than 0.65 ~ 1.65

#### PRINTING PROPERTY

- Image Density  
Min. 0.8 (polyester)  
Min 1.0 (acetate)
- Image Resolution Min. ANSI B

#### IMAGE DURABILITY

- Ironing Resistance GD max. 0.07 (direct, covered with cloth)
- Smear Resistance (dry, wet) GD max. 0.07 (direct, covered with cloth)
- Washing Resistance (water) ID min 1.0 min. ANSI B (nylon)  
ID min 0.6 (polyester)  
ID min 0.7 (acetate)
- Washing Resistance (dry) ID min 1.0 min. ANSI B (nylon)  
ID min 0.6 (polyester)  
ID min 0.7 (acetate)
- Bleach Resistance ID min 1.0 min. ANSI B (nylon)  
ID min 0.6 (polyester)  
ID min 0.8 (acetate)
- Sweat Resistance ID min 1.0 min. ANSI B (nylon)  
ID min 0.6 (polyester)  
ID min 0.8 (acetate)

ID(GD): The differences in image (ground) density resulting from the "before test" and "after test"  
*\*All tests specifications are based on Ricoh's standard test methods.*

#### USAGE ENVIRONMENT:

5 ~ 35°C (41 ~ 95°F), 30 ~ 85%RH

#### STORAGE CONDITIONS:

Keep indoors, away from high temperatures, high humidity and direct sunlight. Keep master rolls hanging horizontally.

#### GUARANTEE PERIOD:

- \*Finished rolls: 2 years after manufacturing
- \*Master rolls: 1 year after coating

#### FEATURES:

- Printable on receiving cloths (nylon, polyester and acetate) and films
- Super smear resistance up to 150°C (302°F); no blurring of image occurs from ironing
- Print images are highly durable against water and dry cleaning
- Superior thermal head matching qualities using Ricoh's unique back-side coating

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# D110C

(For Flat Head Printers)

## Thermal Transfer Ribbon Product Information

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Last update:  
Apr. 2017  
Ref: PS-1795 (Rev. 1)

### RESIN SPECIALTY (For Textile Applications)

#### RIBBON PROPERTY

- Base Material
- Base Thickness (μm)

Polyester film  
4.5 ± 0.4

#### INK PROPERTY

- Ink Color
- Ink Transparency

Black  
More than 0.65 ~ 1.65

#### IMAGE PROPERTY

- Image Density

Min. 1.2 (nylon)  
Min. 0.8 (polyester)  
Min 1.0 (acetate)  
Min. ANSI B

- Image Resolution

#### IMAGE DURABILITY

- Ironing Resistance
- Smear Resistance (wet)
- Washing Resistance (water 5 times)

GD max. 0.07 (background image density w/direct and indirect ironing 10x)  
Image not changed after rubbing 10x  
ID min 1.20 (nylon)

- Washing Resistance (dry 5 times)

ID min 0.95 (polyester)  
ID min 0.75 (acetate)  
ID min 1.25 (nylon)

- Bleach Resistance

ID min 1.20 (polyester)  
ID min 1.00 (acetate)  
ID min 1.50 (nylon)

- Sweat Resistance

ID min 1.25 (polyester)  
ID min 1.10 (acetate)  
ID min 1.40 (nylon)

ID min 1.20 (polyester)  
ID min 1.00 (acetate)

ID(GD): The differences in image (ground) density resulting from the "before test" and "after test"  
*\*All tests specifications are based on Ricoh's standard test methods.*

#### USAGE ENVIRONMENT:

5 ~ 35°C (41 ~ 95°F), 30 ~ 85%RH

#### STORAGE CONDITIONS:

Keep indoors, away from high temperatures, high humidity and direct sunlight. Keep master rolls hanging horizontally.

#### GUARANTEE PERIOD:

\*Finished rolls:

2 years after manufacturing

\*Master rolls:

1 year after coating

#### FEATURES:

- Printable on receiving cloths (nylon, polyester and acetate) and films
- Super smear resistance up to 150°C (302°F); no blurring of image occurs from ironing
- Print images are highly durable against water and dry cleaning
- Superior thermal head matching qualities using Ricoh's unique back-side coating

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