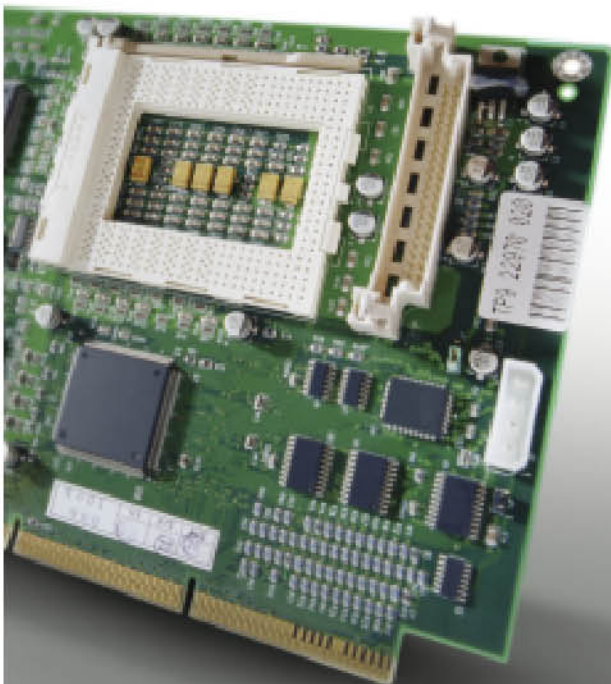


## RICOH THERMAL TRANSFER RIBBON

Highly reliable on-demand recording media



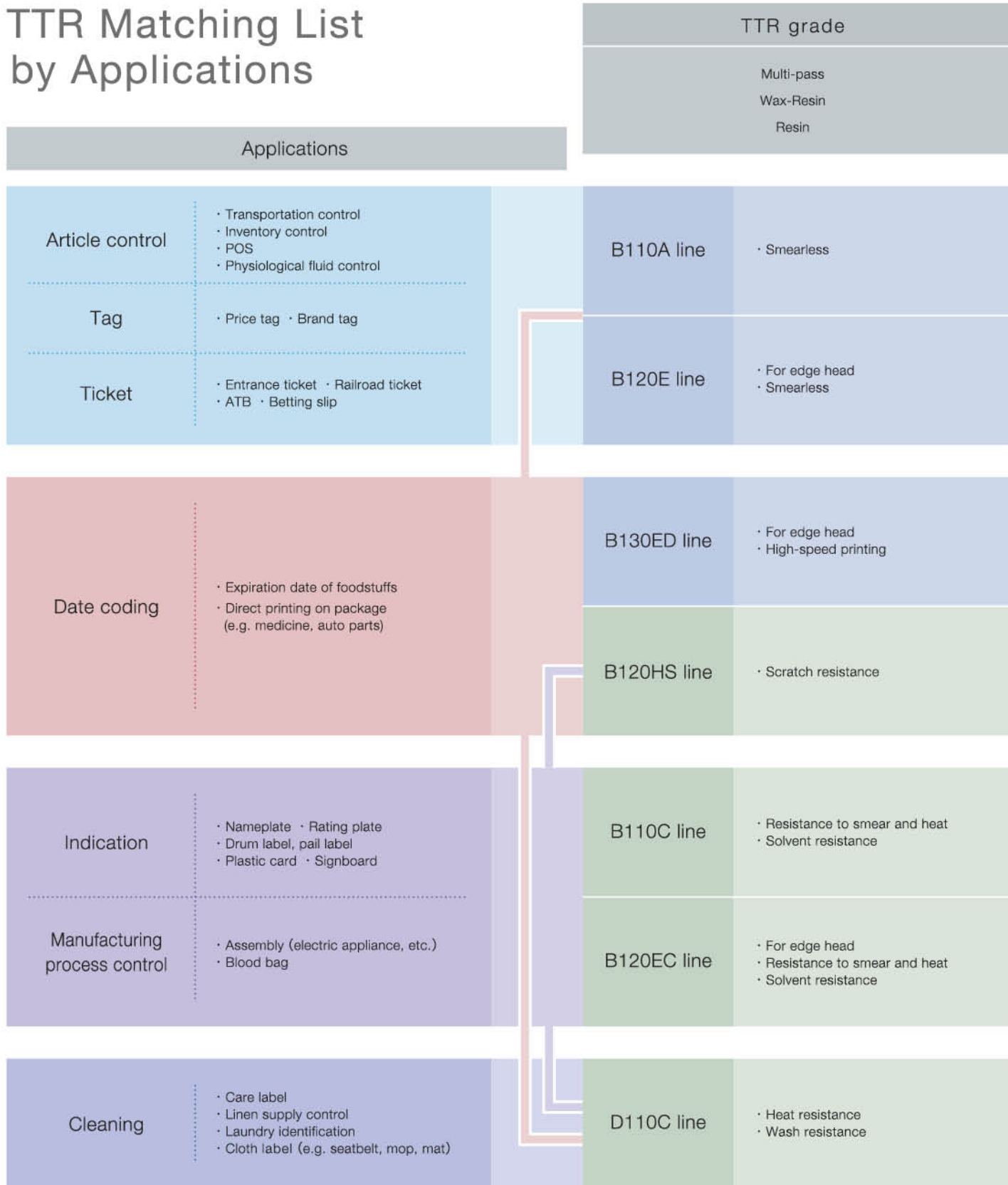


## Helping Clarify Communications

Ricoh Thermal Transfer Ribbon is the result of Ricoh's long experience as a manufacturer of cutting-edge information and communications equipment. Indeed, our products are used in more than 120 countries around the world. Our advanced thermal transfer technology is designed to help you convey information more clearly and accurately, and we trust it will meet your highest standards.



# TTR Matching List by Applications



## Receiver Matching Quality

Paper base				Film base					Cloth base		
Light weight coated paper	Coated paper	Gloss paper	RICOH RPR	PE (polyethylene)	PP (polypropylene)	PVC (polyvinylchloride)	PET (polyester)	PI (polyimide)	Nylon	Polyester	Acetate
⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
○	○	○	⊙	⊙	⊙	○	⊙	⊙	○	○	○
-	-	-	⊙	⊙	⊙	-	-	-	-	-	-
-	-	-	⊙	○	○	⊙	⊙	⊙	-	-	-
-	-	-	⊙	○	○	⊙	⊙	⊙	-	-	-
-	-	-	⊙	-	-	-	⊙	⊙	⊙	⊙	⊙

⊙ Most suitable    
 ○ Suitable    
 - Not suitable

\*Please note: Some receiving materials would not accept printing by these TTRs.

\*If a specific treatment which is suitable for TTR printing is made on receiving materials, suitability will expand.

For example, synthetic paper made of PP with suitable coating for TTR printing will have best printed image with B110C and B110CX.

## Article control, tag, ticket

Article control	Production control Inventory control Transportation control
Tag	Price tag Brand tag
Ticket	Entrance ticket Railroad ticket ATB Betting slip

### B110A line (Smearless)

Product	Color	TTR grade	Resistance to smear and heat	Features	Applications
B110A	Black	Wax-Resin	50°C (122°F)	<ul style="list-style-type: none"> <li>High resolution</li> <li>50°C corrugated cardboard scrape resistance</li> </ul>	<ul style="list-style-type: none"> <li>General use when barcode readability is specifically required.</li> <li>Resistant to high temperatures and vibration during transportation and suitable for delivery and distribution control.</li> </ul>
B210A B310A B410A B610A	Blue Red Brown Green	Wax-Resin	50°C (122°F)	<ul style="list-style-type: none"> <li>B110A's color variation</li> <li>High resolution</li> <li>50°C corrugated cardboard scrape resistance</li> </ul>	<ul style="list-style-type: none"> <li>Identification in inventory control.</li> <li>Printing corporate logo.</li> </ul>

### B120E line (For edge head, smearless)

Product	Color	TTR grade	Resistance to smear and heat	Features	Applications
B120E	Black	Wax-Resin	30°C (86°F)	<ul style="list-style-type: none"> <li>High resolution</li> <li>For low-smoothness paper</li> </ul>	<ul style="list-style-type: none"> <li>General use when barcode readability is specifically required.</li> <li>For low-smoothness paper like tickets.</li> </ul>
B130EV	Black	Wax-Resin	30°C (86°F)	<ul style="list-style-type: none"> <li>High resolution</li> <li>High-speed printing (10~12"/s)</li> </ul>	<ul style="list-style-type: none"> <li>Edge head which can print at high speed makes it suitable for high-volume printing.</li> </ul>

## Date coding

USE BY 6 MAY  
 LOT NO. 070802  


### Date coding

Expiration date of  
 foodstuffs  
 Direct printing on package  
 (e.g. medicine, auto parts)

### B130ED line (For edge head, high-speed printing)

Product	Color	TTR grade	Features	Applications
B130ED	Black	Wax-Resin	<ul style="list-style-type: none"> <li>For PE, PP, PET, Nylon</li> <li>Ultrahigh-speed printing (20~24"/s)</li> <li>High image density</li> </ul>	<ul style="list-style-type: none"> <li>General packages for food.</li> <li>Date printing for foods like bread and pasta which require high-speed, high-volume printing.</li> <li>Clear image is possible even on transparent packages because printed image blocks light.</li> </ul>

### B120HS line (Scratch resistance)

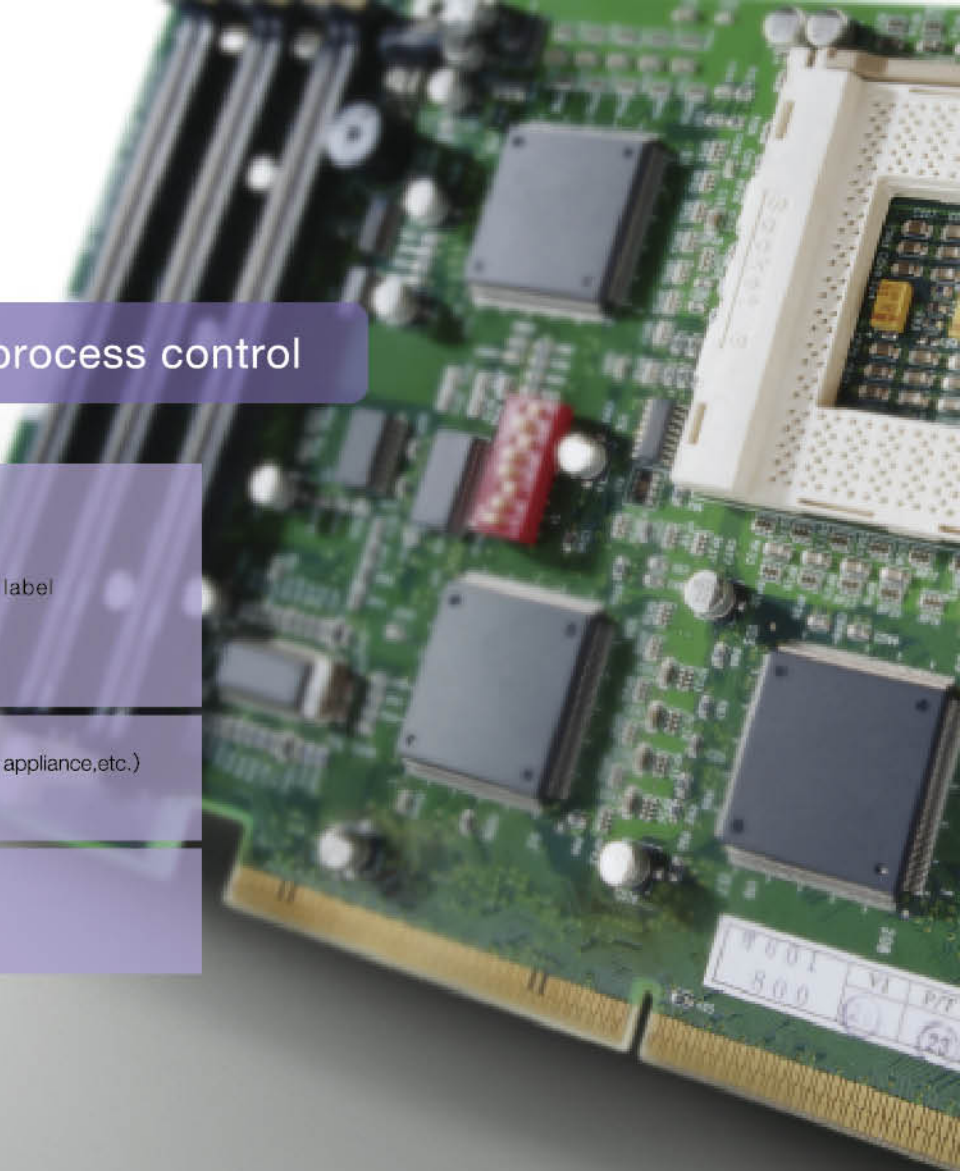
Product	Color	TTR grade	Features	Applications
B120HS	Black	Resin	<ul style="list-style-type: none"> <li>For PE, PP</li> <li>High image density</li> <li>Scratch resistance</li> </ul>	<ul style="list-style-type: none"> <li>Suitable for PE, PP which are main packaging materials for food.</li> <li>Clear image is possible even on transparent packages because printed image blocks light.</li> <li>No spoiling of image during transportation and handling of food.</li> </ul>

### Appropriateness of other product lines

Product	Color	TTR grade	Features	Applications
D110C	Black	Resin	<ul style="list-style-type: none"> <li>For nylon</li> <li>High heat resistance</li> </ul>	<ul style="list-style-type: none"> <li>Suitable for heat-resistant nylon packages which are often boiled.</li> </ul>

## Indication, manufacturing process control

<b>Indication</b>	Nameplate Rating plate Drum label, pail label Plastic card Signboard
<b>Manufacturing process control</b>	Assembly (electric appliance, etc.) Blood bag
<b>Traceability</b>	Ampule Medicine



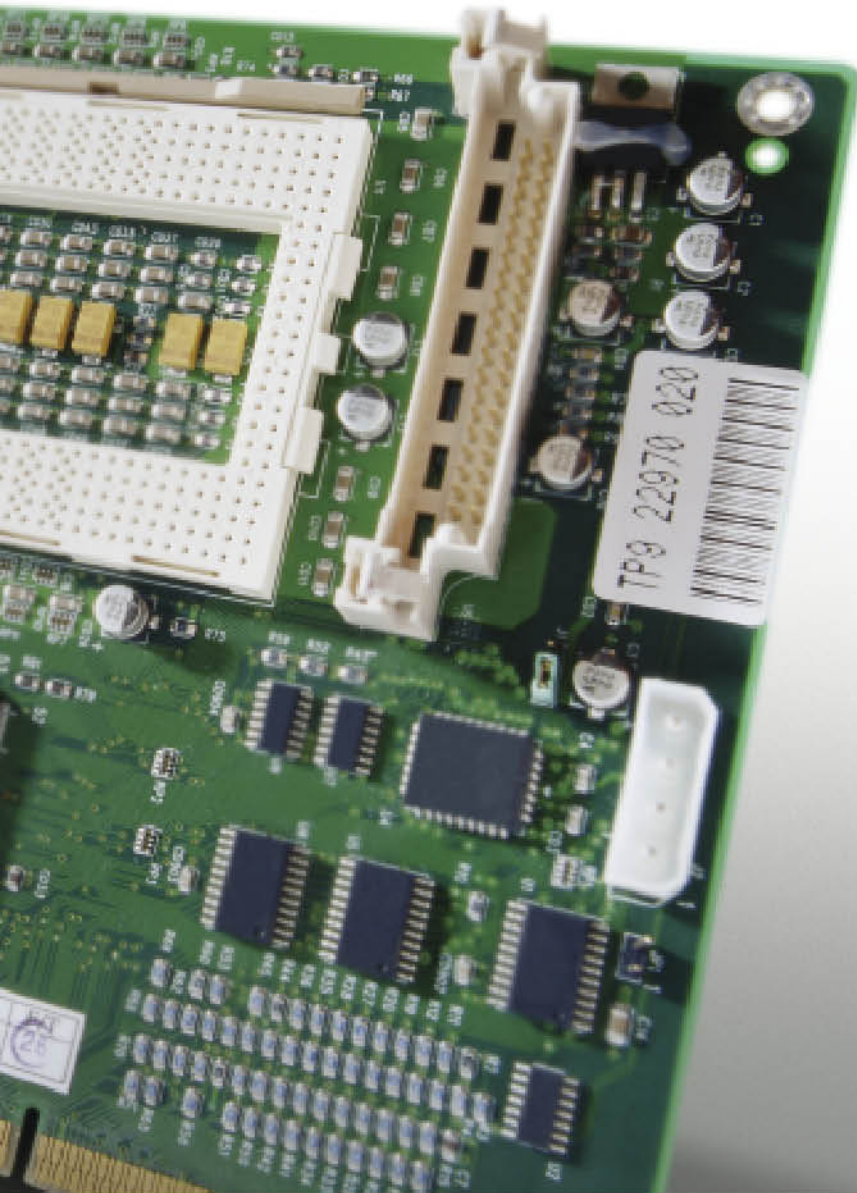
### B110C line (Resistance to smear and heat, solvent resistance)

Product	Color	TTR grade	Resistance to smear and heat	Features	Applications
B110C	Black	Resin	100°C (212°F)	<ul style="list-style-type: none"> <li>100°C corrugated cardboard scrape resistance</li> <li>Solvent resistance (ethanol, kerosene, engine oil)</li> </ul>	<ul style="list-style-type: none"> <li>For nameplates cleaned with alcohol when being finished.</li> <li>For automobile manufacturing process control</li> </ul>
B110CR	Black	Resin	100°C (212°F)	<ul style="list-style-type: none"> <li>Ultra solvent resistance (for applications requiring higher solvent resistance than B110C)</li> <li>600DPI resolution</li> </ul>	<ul style="list-style-type: none"> <li>For small characters and barcodes on nameplate.</li> <li>For heavy duty use</li> </ul>

### Ultra chemicalresistance printing media

Product	Classification	Color	TTR grade	Features	Applications
B110CU	TTR	Black	Resin		
RFR-W	Specified receiving material	White	Designed for B110CU Base material: PP base	<ul style="list-style-type: none"> <li>Ultra chemicalresistance (ethanol, IPA, acetone, MEX, thinner, xylene, brake-fluid, water)</li> <li>100°C corrugated cardboard scrape resistance</li> <li>Scratch resistance</li> <li>UL approval</li> </ul>	<ul style="list-style-type: none"> <li>For transportation equipment, parts nameplate, process control where heavy solvent is used for finish cleaning.</li> <li>For chemical label on drum or container which is exposed to heavy solvents.</li> <li>For medical applications (e.g. control diagnostic of pathologic histology)</li> </ul>
RFR-WP	Specified receiving material	White	Designed for B110CU Base material: PET base	<ul style="list-style-type: none"> <li>Thermal printing becomes possible even in processes where many solvents are used.</li> </ul>	
RFR-SP	Specified receiving material	Silver	Designed for B110CU Base material: PET base		





### ■ Appropriateness of other product lines

Product	Color	TTR grade	Features	Applications
B120HS	Black	Resin	<ul style="list-style-type: none"> <li>For polyolefine film like PP, PE</li> </ul>	<ul style="list-style-type: none"> <li>Suitable for usage of PP, PE for process control label, the surface of which is not treated for purposes of cost reduction.</li> </ul>
D110C	Black	Resin	<ul style="list-style-type: none"> <li>For film like PI (polyimide), PET</li> <li>High heat resistance</li> <li>Solvent resistance (gasoline, kerosene, engine oil)</li> </ul>	<ul style="list-style-type: none"> <li>Heat-resistant applications such as 200°C steaming process for blood formulation agent.</li> <li>Color coding identification for process control.</li> </ul>
D210A	Navy			
D310A	Red			

### ■ B120EC line (For edge head, resistance to smear and heat, solvent resistance)

Product	Color	TTR grade	Resistance to smear and heat	Features	Applications
B120EC	Black	Resin	100°C (212°F)	<ul style="list-style-type: none"> <li>100°C corrugated cardboard scrape resistance</li> <li>Solvent resistance (ethanol, kerosene, engine oil)</li> <li>Scratch resistance</li> </ul>	<ul style="list-style-type: none"> <li>For nameplates cleaned with alcohol when being finished.</li> <li>For automobile manufacturing process control</li> <li>For contacting hard items like cards and rental videocassettes.</li> </ul>

### ■ Receiving materials line

Product	Base material	Base weight g/m	Thickness μm	Features	Applications
RPR	Paper based	69±8	78±8	<ul style="list-style-type: none"> <li>Finest print productivity with Ricoh's Wax-Resin, Resin ribbons.</li> <li>Water resistance</li> <li>Chemical resistance</li> </ul>	<ul style="list-style-type: none"> <li>Nameplates, identification label</li> <li>Serial# label for appliances and peripherals</li> <li>Drum label</li> </ul>



## Cleaning

### Cleaning

Care label  
 Linen supply control  
 Laundry identification  
 Cloth label (e.g. seatbelt, mop, mat)

### D110C line (Heat resistance, wash resistance)

Product	Color	TTR grade	Features	Applications
D110C	Black	Resin	<ul style="list-style-type: none"> <li>High image density</li> <li>Printing on cloth (nylon polyester, acetate)</li> <li>Wash resistance Water: 80°C, 225 minutes</li> <li>Dry cleaning: Perchloroethylene 40°C, 150 minutes</li> <li>Ironing resistance (150°C)</li> </ul>	<ul style="list-style-type: none"> <li>Care label, linen and cloth products (e.g. seatbelt, mop, mat) indication label.</li> </ul>
D210A	Navy	Resin	<ul style="list-style-type: none"> <li>Printing on cloth (nylon, polyester, acetate)</li> <li>Wash resistance Water: 80°C, 20 minutes</li> <li>Dry cleaning: Perchloroethylene 40°C, 30 minutes</li> <li>Ironing resistance (150°C)</li> </ul>	<ul style="list-style-type: none"> <li>Navy color printing on care label for underwear.</li> <li>Corporate logo printing on care label.</li> <li>Identification for washing and distribution.</li> </ul>
D310A	Red	Resin	<ul style="list-style-type: none"> <li>Printing on cloth (nylon, polyester, acetate)</li> <li>Wash resistance Water: 80°C, 20 minutes</li> <li>Dry cleaning: Perchloroethylene 40°C, 30 minutes</li> <li>Ironing resistance (150°C)</li> </ul>	<ul style="list-style-type: none"> <li>Care label prohibition X mark.</li> <li>Corporate logo printing on care label.</li> <li>Identification for washing and distribution.</li> </ul>

## World-Renowned Ricoh Quality

Ricoh employs the latest large-scale equipment and thin layer coating technology to provide customers around the world with a stable supply of superior thermal transfer ribbons. Our plants and employees are establishing a new global standard for quality control and environmental protection.

● NUMAZU PLANT

● FUKUI PLANT

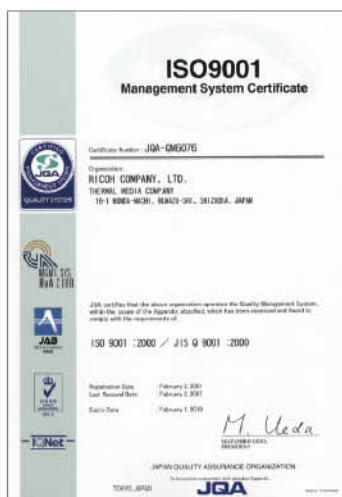
🇺🇸 RICOH ELECTRONICS, INC.

🇫🇷 RICOH INDUSTRIE FRANCE S.A.S.

🇨🇳 RICOH THERMAL MEDIA (BEIJING) CO., LTD.

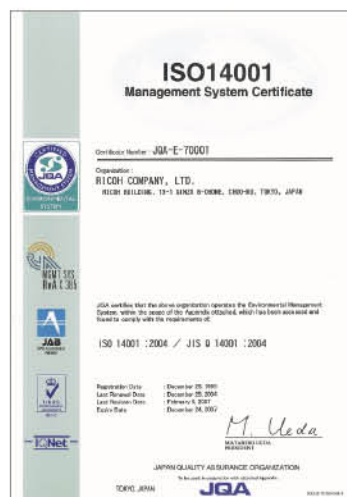
🇨🇳 RICOH THERMAL MEDIA (WUXI) CO., LTD.

🇨🇳 RICOH INTERNATIONAL (SHANGHAI) CO., LTD



### JQA Certification for ISO 9001

Ricoh Thermal Transfer Ribbon was developed and is produced at the plants (Numazu and Fukui) approved by ISO (International Organization for Standardization) 9001. Under this strict quality management system, we ensure a stable supply of products that satisfy our customers. (Certificate No. JQA-QM6076)



### JQA Certification for ISO 14001

Ricoh has an environmental management system, and observes legal and self regulation on environmental impact. Establishing targets of contamination protection and resource and energy saving, we are making continuous improvement. We are also making an effort to develop safe and pollution-free products that will contribute to reduce industrial wastes. (Certificate No. JQA-E-70001)

For more information, visit:

<http://www.ricoh.com/thermal>

---

**RICOH**

**RICOH COMPANY, LTD.**

Thermal Media Company Sales & Marketing Department  
3-2-3, Shin-yokohama, Kohoku-ku, Yokohama 222-8530, Japan  
Tel: +81-45-477-1617 Fax: +81-45-477-1622

\*Specifications are subject to change without notice.

\*The color(s) of the actual product may vary from the color(s) shown in this brochure.

Information in this catalog is current as of April 2008