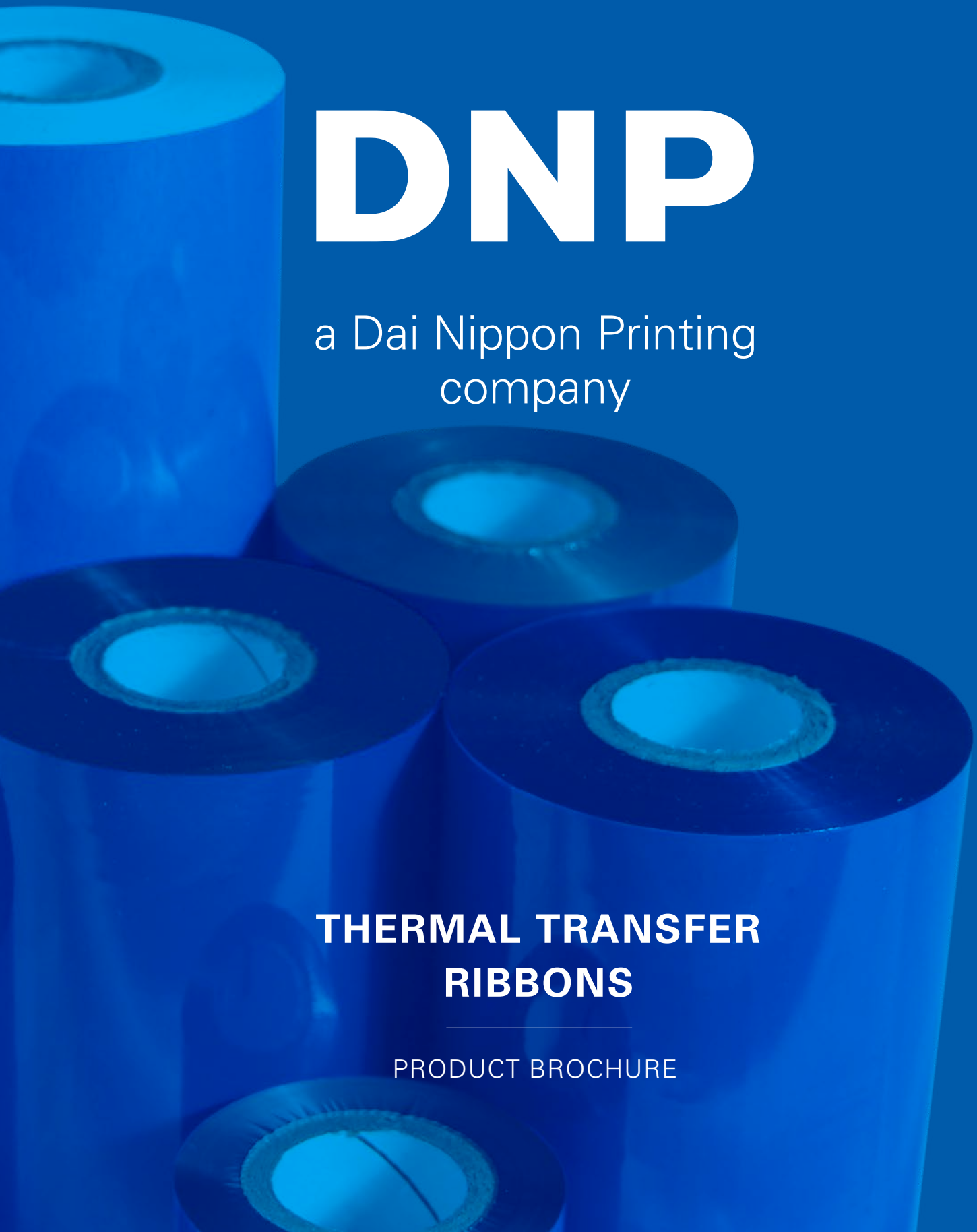
DNP

a Dai Nippon Printing company



THERMAL TRANSFER RIBBONS

PRODUCT BROCHURE

DELIVERING VARIABLE PRINT EXCELLENCE

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INTRODUCTION

Whether you are searching for the answer to a challenging application or looking to broaden your Thermal Transfer Ribbon range, this product brochure is here to make your decision easier.
Discover DNP's services and product combinations, and challenge our in-house lab with your toughest applications today!

Delivering variable print excellence

Compliant and high-quality variable prints, such as barcodes, are essential in any coding requirement. DNP produces high-quality Thermal Transfer Ribbons that deliver just this. Our expertise is to find the ribbon that meets the exact requirements of your application and production system.

Peace-of-mind on variable code printing

Variable code printing should in no way compromise your production process and supply chain. The unique cost-to-risk ratio of Thermal Transfer Ribbons makes it a consumable that should perform, be reliable and available at any moment. The constant high quality of DNP Thermal Transfer Ribbons, combined with tailored service that delivers the ribbons to your exact needs, secures peace-of-mind on variable code printing.

Harmonising substrate, printer and ribbon

For each application, DNP has a ribbon. We work closely with printer and label manufacturers to ensure that the ribbon of choice performs optimally in your production. The main characteristics of the DNP ribbons are provided in the overview. Our experts are available to answer specific questions and help you with your thermal transfer print challenges.

BENEFITS OF WORKING WITH DNP

Quality guarantee

DNP Thermal Transfer Ribbons are produced using strict quality measurement systems to ensure high quality products to all our customers. All ribbons are guaranteed for life against any manufacturing defects in normal conditions of use and storage. Suitable for different regulations and compliances, most DNP Thermal Transfer Ribbons are approved for one or more of the following industry certifications: Isega, BS5609, REACH, RoHS, GHS and UL.

Quick production and delivery

With operations running 24 hours straight on weekdays, DNP ensures short lead times for both made-to-order and stock products. For standard qualities and size specifications order through DNP's stock programme, the Blue Book Programme. When you send in a Blue Book order before 12 o'clock (CET/CEST) on working days, your order will be shipped out the same day. Should you need products tailored to your needs, we can produce made-to-order ribbons within about 5 working days.

In-house lab testing support

Testing new products can be challenging with production running on the side. This is why we offer to help you test products in DNP's own in-house lab. Let it be a challenging application that you need our help with or simply a ribbon and substrate combination, our Product Management Engineers are ready to take your requests at any time.

Broad portfolio of ribbons

With offices all around the world, DNP's R&D centres focus on constant improvement of current portfolio products and the development of new products for the Thermal Transfer Ribbon market. To accommodate for a wide variety of end applications in e.g. pharmaceuticals, food & beverage, chemicals, and automotive, DNP offers a broad portfolio of Thermal Transfer Ribbons.

Tailor made solutions

DNP offers great flexibility when it comes to ribbon sizes, colours, cores, leaders and trailers. As a standard, ribbons are provided with a DNP-leader and a universal trailer. However, there is a possibility to get ribbons tailored to your needs to fulfil your branding requirements.

PRODUCT OVERVIEW

Ribbon	Flat-head wax		Flat-head wax/resin				Flat-head resin						Near-edge wax/resin			Near-edge resin		Colour wax		Colour wax/ resin	Colour resin						Specialty resin			
	TR4085plus® Resin enhanced wax	**MP Wax** Standard wax	**M255** Premium wax/resin	**M265** Ultra durable wax/resin	**TR5080** Specialty wax/resin	**TR6080** High performance wax/resin	**V300** Versatility Defined resin	**R300** General purpose resin	**R510** Ultra durable resin	**R316** Heat resistant resin	**R550** Extremely durable resin	**TR7541** Boiling resistant resin (also NE)	**M295HD -** High density print-on-packaging wax/resin	**M295HD 4.0 -** X-tra Long high density print-on-packaging wax/ resin	**TR4500** Premium wax/resin	**R390** General purpose resin	**R396** High speed durable resin	**TR3020** Transparent wax	**TR302X** General purpose colour wax	**M295C -** Print-on-packaging colour wax/resin	**R300 Red** General purpose colour resin	**R410D-White** Ultra opaque white resin	**R510C** Ultra durable colour resin	**R510W** Durable white resin	**TR3370** High opacity white resin	**VR301** Durable metallic colour resin	**R395** Textile resin	**UV transparent resin**	**Hologram resin**	**Scratch-off resin**
Papers																														
Vellum	✓	✓	✓		✓	✓	✓			✓				✓	✓			✓	✓											
Uncoated paper	✓	✓	✓		✓	✓	✓			✓					✓			✓	✓											
Coated paper	✓	✓	✓	✓	✓	✓	✓	✓		✓			✓	✓	✓	✓	✓	✓	✓	✓	✓								✓	
Gloss	✓	✓	✓	✓	✓	✓	✓	✓			✓		✓	✓	✓	✓	✓			✓	✓							✓	✓	
(UV)Varnished	✓		✓	✓ (UV)	✓		✓	✓				✓ (UV)																		
Pre-printed				✓			✓						✓	✓	✓															
Flood-coated	✓		✓	✓	✓		✓	✓						✓	✓	✓				✓								✓		
Synthetic	✓		✓	✓	✓	✓	✓	✓		✓			✓	✓		✓		✓	✓	✓								✓	✓	
Economic synthetics																														
Polypropylene	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓				✓
Polystyrene	✓			✓	✓		✓	✓			✓		✓	✓	✓	✓				✓										
Polyethylene (LDPE)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓		✓		✓
Polyethylene (HDPE)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓		✓		✓
Polyester	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
Polyimide									✓		✓		✓	✓								✓								
Top-coated Vinyl	✓	✓	✓	✓	✓	✓		✓	✓		✓					✓			✓	✓	✓	✓	✓	✓	✓	✓				
Vinyl							✓	✓												✓										
Specialty materials																														
PVC (shrink tube)	✓			✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		✓				✓	✓	✓	✓	✓	✓	✓			✓	✓
Valeron	✓		✓	✓	✓	✓		✓		✓					✓	✓		✓		✓										
Kimdura	✓		✓	✓	✓			✓		✓					✓	✓		✓		✓										
Polyart	✓		✓	✓	✓		✓	✓		✓					✓	✓		✓		✓										
Tyvek®	✓		✓		✓	✓								✓	✓				✓											
Tyvek®brilion	✓		✓	✓	✓	✓	✓			✓				✓	✓				✓								✓			
(UV) Varnished	✓		✓		✓		✓					✓ (UV)																		
Kromekote										✓																				
Kapton										✓			✓	✓																
Teslin®	✓		✓				✓	✓		✓			✓	✓	✓				✓	✓							✓			
Polycarbonate (Cards)							✓																							
(Untreated) rubber							✓																							
ABS																														✓
Aluminium											✓																			
Textiles																														
Coated textile																											✓			
Synthetic films																											✓			
Woven fabrics																											✓			
(Nylon) Taffeta	✓		✓	✓	✓		✓	✓	✓	✓	✓					✓			✓		✓	✓					✓			
Satin				✓					✓	✓	✓												✓	✓			✓			
Nylon												✓	✓	✓			✓			✓							✓		✓	
Polyester																				✓							✓			
Acetate																											✓			

TR4085PLUS®
RESIN ENHANCED WAX

ALL-ROUND WAX RIBBON FOR VARIOUS LABEL MATERIALS TO MINIMISE PRINT PRODUCTION CHANGE-OVERS

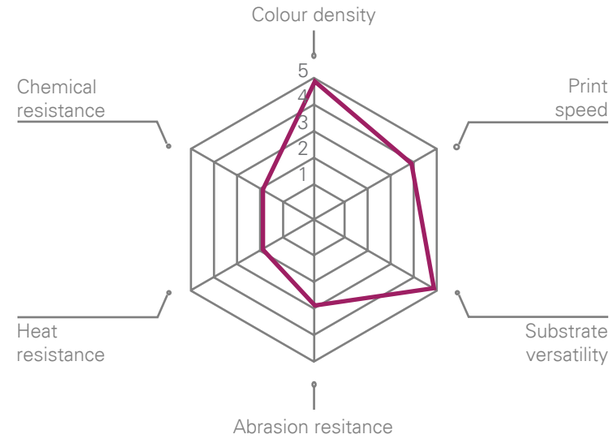
Performance characteristics

- High printing speed
- Excellent optical density (Macbeth)
- Abrasion and smudge resistance
- Anti-static back coating for easy handling and extended printhead life
- Halogen-free

Technical Product Information

Ink	Wax (resin enhanced)
Colour	Black
Total thickness	8.0 ± 0.5µm
Base film thickness	4.8 ± 0.3µm
Ink thickness	3.2 ± 0.2µm

Spider diagram features of TR4085plus®



Recommended industries

Food & beverage · Health & beauty · Inventory & logistics · Pharma & healthcare · Electronics

Recommended substrates

Paper	
Vellum	●●●●●
Uncoated paper	●●●●●
Coated paper	●●●●●

Economic synthetics	
Polypropylene	●●●○○
Polyethylene	●●●○○
Polyester	●●●○○

MP WAX

STANDARD WAX

ECONOMY WAX FOR GENERAL PURPOSE APPLICATIONS

Performance characteristics

- Excellent optical density (Macbeth)
- High printing speed
- Abrasion and smudge resistance
- Halogen-free
- Anti-static back coating for easy handling and extended printhead life

Technical Product Information

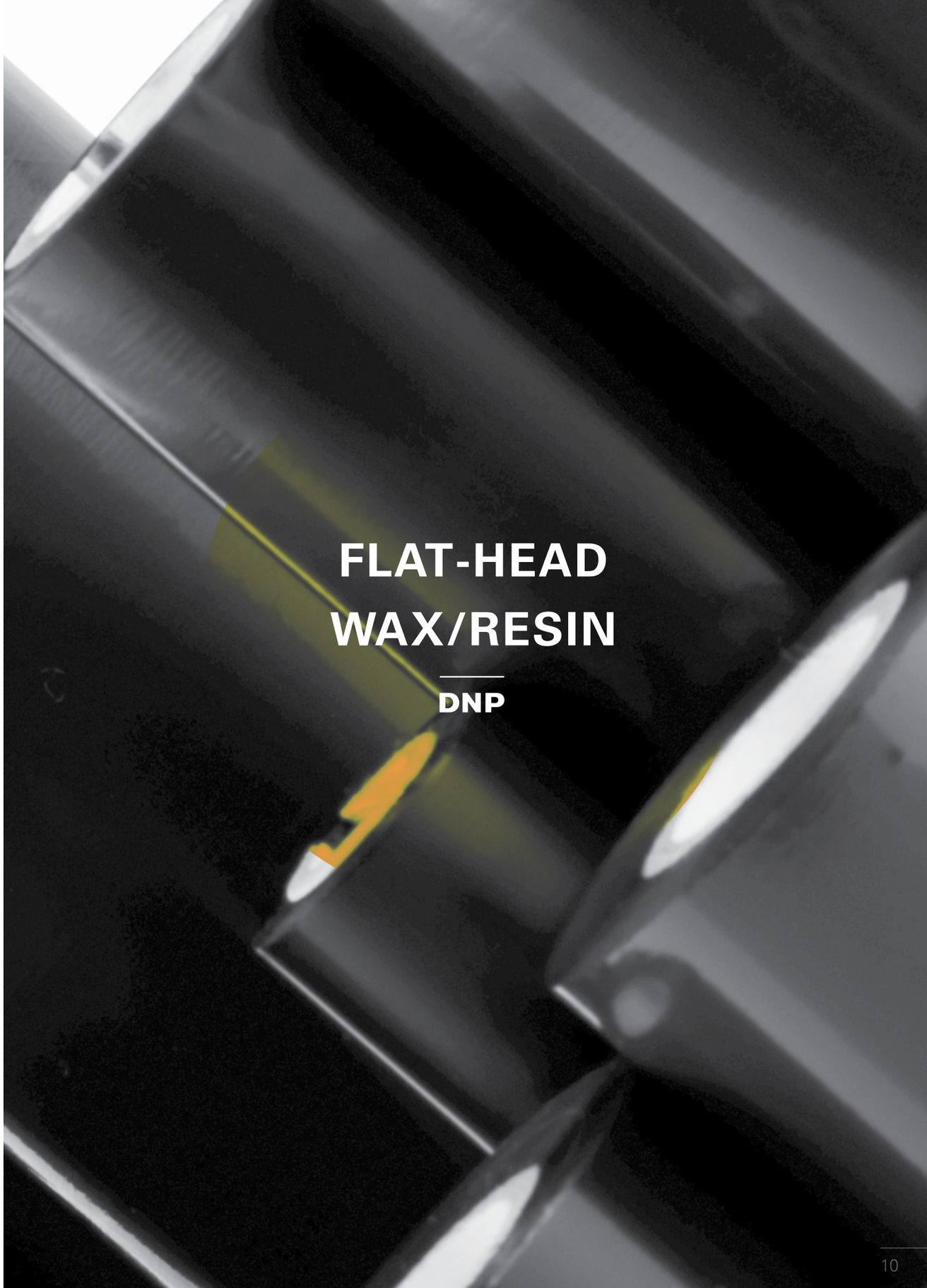
Ink	Wax
Colour	Black
Total thickness	7.8 ± 0.6µm
Base film thickness	4.8 ± 0.3µm
Ink thickness	3.0 ± 0.3µm

Recommended industries

Food & beverage

Inventory & logistics

Recommended substrates
Find out the recommended substrates for each ribbon on pages 05-06



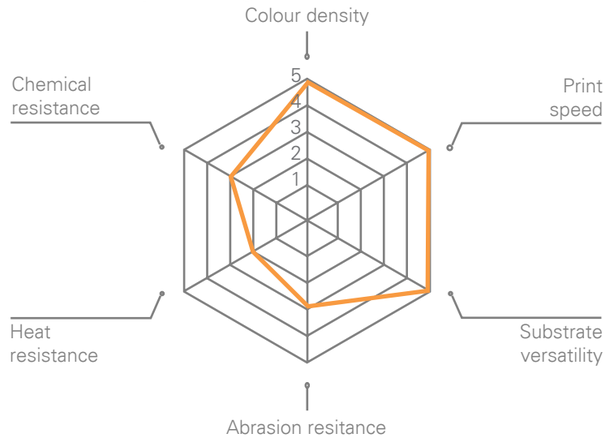
M255
PREMIUM WAX/RESIN

ALL-ROUND WAX/RESIN RIBBON FOR MANY DIFFERENT LABELS TO MINIMISE PRINT PRODUCTION CHANGE-OVERS

Performance characteristics

- High printing speed
- High print sensitivity
- Medium heat resistance
- Excellent optical density (Macbeth)
- Broad print range
- High scannability
- Good chemical resistance
- Abrasion & smudge resistance
- Anti-static back coating for easy handling and extended printhead life
- Halogen-free

Spider diagram features of M255



Technical Product Information

Ink	Wax/Resin
Colour	Black
Total thickness	8.3 ± 0.3µm
Base film thickness	4.8 ± 0.3µm
Ink thickness	3.1 ± 0.2µm

Recommended industries

Food & beverage · Health & beauty · Inventory & logistics · Pharma & healthcare · Outdoor · Textile

Recommended substrates

Paper		Economic synthetics	
Vellum	●●●●●	Polypropylene	●●●●○
Uncoated paper	●●●●●	Polyethylene	●●●●○
Coated paper	●●●●●	Polyester	●●●●○

TR5080
SPECIALTY WAX/RESIN

ENTRY-LEVEL WAX/RESIN RIBBON FOR MANY DIFFERENT TYPES OF LABEL SUBSTRATES

Performance characteristics

- Ideal for printing on spot-coated and flood-coated labels
- Eliminates the cost of special varnishes
- Excellent edge definition for dark, dense images (400 dpi and up) and improved scan rates
- Prints at high printing speeds (12 IPS) delivering crisp, rotated barcodes
- Anti-static back coating for easy handling and extended printhead life

Technical Product Information

Ink	Wax/Resin
Colour	Black
Total thickness	8.0 ± 0.5µm
Base film thickness	4.8 ± 0.3µm
Ink thickness	3.2 ± 0.2µm

Recommended industries

Food & beverage · Inventory & logistics · Pharma & healthcare · Outdoor · Textile

TR6080
HIGH PERFORMANCE WAX/RESIN

HIGH-SPEED PRINTABLE WAX/RESIN RIBBON FOR ENHANCED EFFICIENCY

Performance characteristics

- Prints on a wide variety of substrates from rough label stocks to high-gloss paper
- Prints at high printing speeds (up to 12 IPS)
- Medium heat resistant
- Excellent edge definition for dark, dense images and improved scan rates
- Enhanced abrasion & smudge resistance
- Anti-static back coating for easy handling and extended printhead life

Technical Product Information

Ink	Wax/Resin
Colour	Black
Total thickness	8.2 ± 0.5µm
Base film thickness	4.8 ± 0.3µm
Ink thickness	3.4 ± 0.2µm

Recommended industries

Automotive · Health & beauty · Inventory & logistics · Pharma & healthcare · Outdoor

Recommended substrates
Find out the recommended substrates for each ribbon on pages 05-06

M265

ULTRA DURABLE WAX/RESIN

HIGH-END WAX/RESIN IDEAL FOR USAGE ON PREPRINTED LABELS OFFERING HIGH ABRASION AND HEAT RESISTANCE

Performance characteristics

- Extreme abrasion resistance
- Extreme temperature resistance
- Prints up to 12 IPS
- Combines the print sensitivity of a wax/resin with the resistance of resins
- Prints both on flat-head and near-edge printers
- Anti-static back coating for easy handling and extended printhead life

Technical Product Information

Ink	Wax/Resin
Colour	Black
Total thickness	6.2 ± 0.6µm
Base film thickness	4.5 ± 0.5µm
Ink thickness	1.6 ± 0.5µm

Recommended industries

Automotive

Food & beverage

Health & beauty

Pharma & healthcare

Outdoor

Electronics

Textile

Recommended substrates
Find out the recommended substrates for each ribbon on pages 05-06

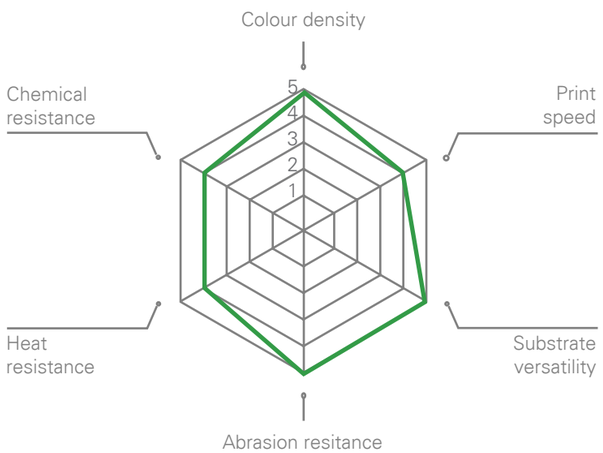
V300
VERSATILITY DEFINED RESIN

THE MOST VERSATILE RESIN PRINTING ON A WIDE VARIETY OF SUBSTRATES WHILE MAINTAINING HIGH DURABILITY

Performance characteristics

- High substrate versatility
- High print sensitivity
- Wide print range
- Outstanding chemical durability such as IPA, ethanol, oil
- Excellent blocking resistance allowing for no issues with ink transferring to the back coating
- High abrasion resistance
- Anti-static back coating for easy handling and extended printhead life

Spider diagram features of V300



Technical Product Information

Ink	Resin
Colour	Black
Total thickness	5.8 ± 0.8 µm
Base film thickness	4.5 ± 0.4 µm
Ink thickness	1.3 ± 0.4 µm

Recommended industries

Automotive · Food & beverage · Health & beauty · Pharma & healthcare · Outdoor · Chemicals · Electronics · Inventory & logistics

Recommended substrates

Paper		Economic synthetics	
Vellum	●●●○○	Polypropylene	●●●●●
Uncoated paper	●●●○○	Polyethylene	●●●●●
Coated paper	●●●●○	Polyester	●●●●●

R300
GENERAL PURPOSE RESIN

ALL-ROUND RESIN FOR LASTING AND RESISTANT PRINT IN DEMANDING APPLICATIONS

Performance characteristics

- Heat resistance up to 199°C
- Excellent print quality at high printing speeds using less print energy
- Excellent durability and chemical resistance
- Very economical resin with DNP's unmatched abrasion resistance
- Anti-static back coating for easy handling and extended printhead life

Technical Product Information

Ink	Resin
Colour	Black
Total thickness	6.0 ± 0.5µm
Base film thickness	4.8 ± 0.3µm
Ink thickness	1.2 ± 0.2µm

Recommended industries

Automotive · Food & beverage · Health & beauty · Inventory & logistics · Pharma & healthcare · Outdoor · Chemicals · Electronics

R316
HEAT RESISTANT RESIN

EXTREMELY HEAT RESISTANT RESIN PARTICULARLY IDEAL FOR AUTOCLAVE APPLICATIONS

Performance characteristics

- Heat resistance up to 220°C
- Industry leading in edge definition for clean, optical density (Macbeth)
- Anti-static back coating for easy handling and extended printhead life

Technical Product Information

Ink	Resin
Colour	Black
Total thickness	7.8 ± 0.5µm
Base film thickness	4.8 ± 0.3µm
Ink thickness	3.0 ± 0.2µm

Recommended industries

Health & beauty · Inventory & logistics · Pharma & healthcare · Outdoor · Electronics

Recommended substrates
Find out the recommended substrates for each ribbon on pages 05-06

R510(HF)

ULTRA DURABLE RESIN

HIGH DURABILITY RESIN DESIGNED FOR HARSH ENVIRONMENTS OFFERING HIGH CHEMICAL SOLVENT RESISTANCE

Performance characteristics

- Heat resistant up to 250°C
- Unique solvent resistance
- Excellent optical density (Macbeth) ensuring sharp edge definition
- Anti-static back coating for easy handling and extended printhead life
- Halogen-free

Technical Product Information

Ink	Resin
Colour	Black
Total thickness	7.5 ± 0.5µm
Base film thickness	4.8 ± 0.3µm
Ink thickness	2.7 ± 0.2µm

Recommended industries

Automotive, Health & beauty, Inventory & logistics, Pharma & healthcare, Outdoor, Chemicals, Electronics

R550

EXTREMELY DURABLE RESIN

PREMIUM RESIN FOR HIGH CHEMICAL AND HEAT RESISTANT APPLICATIONS

Performance characteristics

- Heat resistance up to a continuous temperature of 350°C
- Unique high abrasion and solvent resistance
- Excellent edge definition for dark, dense images and improved scan rates
- Anti-static back coating for easy handling and extended printhead life
- Halogen-free

Technical Product Information

Ink	Resin
Colour	Black
Total thickness	6.5 ± 0.8µm
Base film thickness	4.5 ± 0.4µm
Ink thickness	2.0 ± 0.5µm

Recommended industries

Automotive, Health & beauty, Inventory & logistics, Pharma & healthcare, Outdoor, Chemicals, Electronics

TR7541

BOILING RESISTANT RESIN

RESIN RIBBON RESISTANT TO BOILING WATER FOR FOOD & BEVERAGE APPLICATIONS

Performance characteristics

- Boiling water durability
- Prints on extremely smooth labels below 40 dyne
- Abrasion resistant
- Suitable for flat-head and near-edge printers
- Anti-static back coating for easy handling and extended printhead life
- Halogen-free

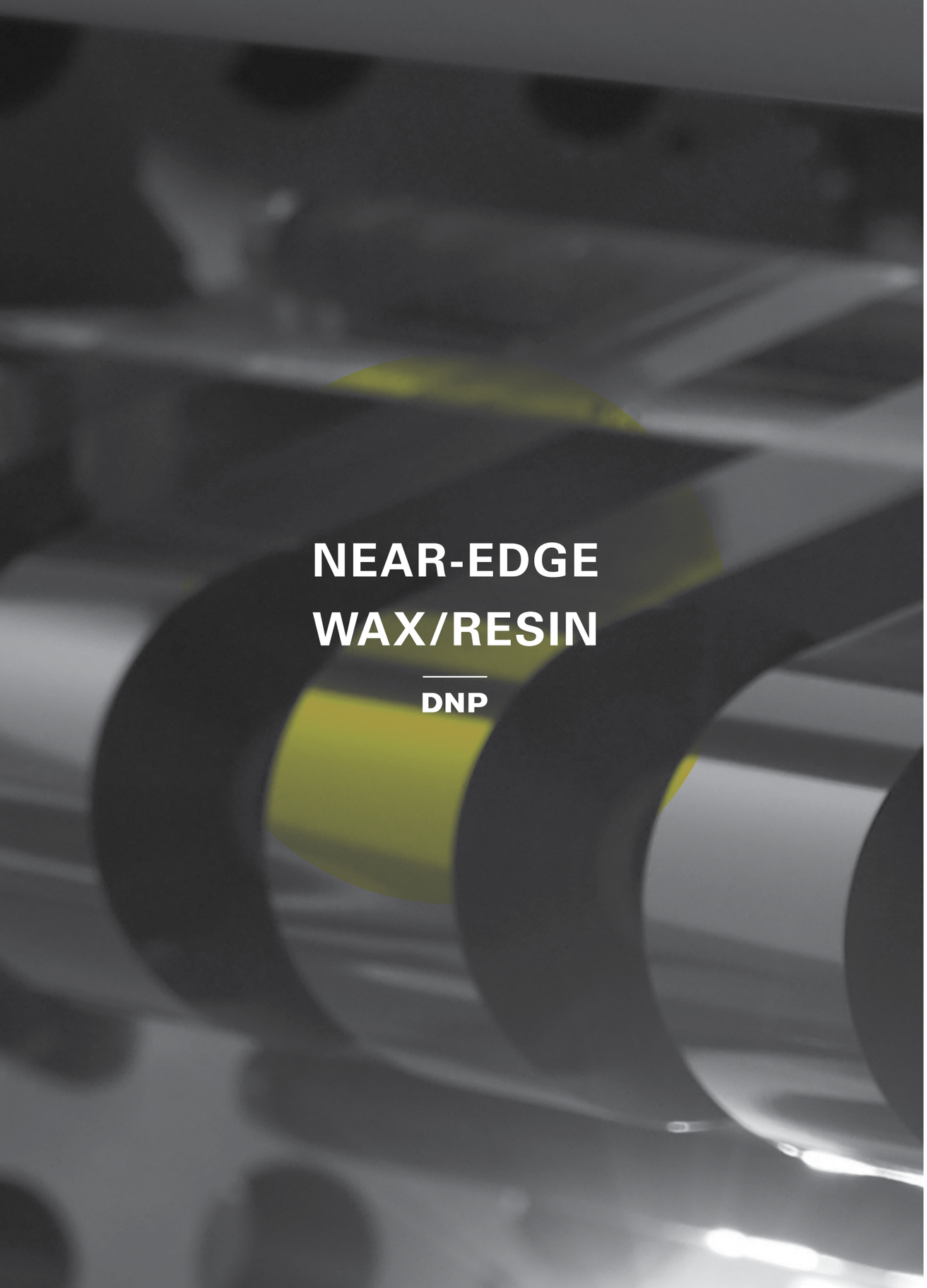
Technical Product Information

Ink	Resin
Colour	Black
Total thickness	6.6 ± 0.8µm
Base film thickness	4.8 ± 0.3µm
Ink thickness	1.8 ± 0.5µm

Recommended industries

Food & beverage, Health & beauty, Pharma & healthcare, Retail

Recommended substrates
Find out the recommended substrates for each ribbon on pages 05-06



M295HD 4.0

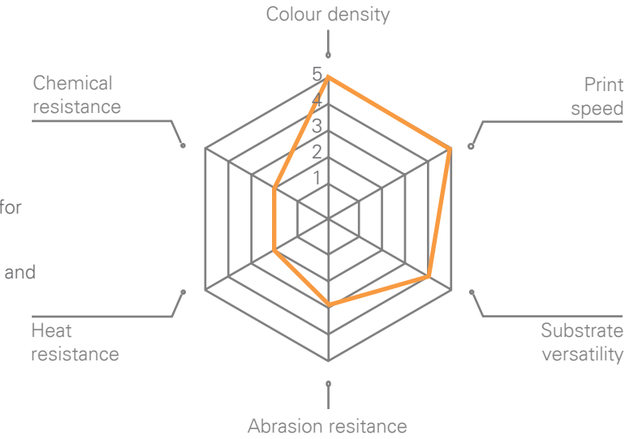
X-TRA LONG HIGH DENSITY PRINT-ON-PACKAGING WAX/RESIN

DROP-IN COMPATIBLE, HIGH-SPEED PRINTING WAX/RESIN FOR FLEXIBLE PACKAGING APPLICATIONS

Performance characteristics

- Long-length ribbon possibility due to thinner total ribbon thickness
- Higher-speed printability (up to 36 IPS)
- Easier printability due to broader print window and improved ink release
- Less plastic waste due to thinner base-film
- Superb colour denisty and small font printability
- Higher print sensitivity saving energy and allowing for a longer print head lifecycle
- Anti-static back coating: easy handling, clean prints and extended printhead life

Spider diagram features of M295HD 4.0



Technical Product Information

Ink	Wax/Resin
Colour	Black
Total thickness	5.6 ± 0.8µm
Base film thickness	4.0 ± 0.4µm
Ink thickness	1.6 ± 0.4µm

Recommended industries

Recommended substrates

Paper	
Vellum	●●○○○
Uncoated paper	○○○○○
Coated paper	●●●●○

Economic synthetics	
Polypropylene	●●●●●
Polyethylene	●●●●○
Polyester	●●●●●

M295HD

HIGH DENSITY PRINT-ON-PACKAGING WAX/RESIN

DROP-IN COMPATIBLE, HIGH-SPEED PRINTING WAX/RESIN FOR FLEXIBLE PACKAGING APPLICATIONS

Performance characteristics

- Extremely high print speeds up to 32 IPS (800 mm per second)
- High image density at standard heat settings
- Excellent rub resistance against oil and grease
- Anti-static back coating for easy handling and extended printhead life
- Halogen-free

Technical Product Information

Ink	Wax/Resin
Colour	Black
Total thickness	6.3 ± 0.5µm
Base film thickness	4.8 ± 0.3µm
Ink thickness	1.5 ± 0.2µm

Recommended industries

Food & beverage

Health & beauty

Pharma & healthcare

TR4500

PREMIUM WAX/RESIN

EASILY PRINTABLE NEAR-EDGE WAX/RESIN RIBBON FOR ROUGH AND SMOOTH MATERIALS

Performance characteristics

- Excellent edge definition for dark, dense images and improved scan rates
- Prints excellent images on a wide variety of label and tag stocks
- Anti-static back coating for easy handling and extended printhead life
- Halogen-free

Technical Product Information

Ink	Wax/Resin
Colour	Black
Total thickness	8.2 ± 0.5µm
Base film thickness	4.8 ± 0.3µm
Ink thickness	3.4 ± 0.2µm

Recommended industries

Food & beverage

Health & beauty

Inventory & logistics

Pharma & healthcare

Outdoor

Retail

Recommended substrates
Find out the recommended substrates for each ribbon on pages 05-06

R390

GENERAL PURPOSE RESIN

ALL-ROUND NEAR-EDGE RESIN OFFERING HIGH HEAT AND SOLVENT RESISTANCE

Performance characteristics

- Excellent print quality at high printing speeds
- Increased durability across a wide range of resin applications
- High substrate versatility
- Excellent edge definition for dark, dense images and improved scan rates
- Anti-static back coating for easy handling and extended printhead life

Technical Product Information

Ink	Resin
Colour	Black
Total thickness	6.0 ± 0.5µm
Base film thickness	4.8 ± 0.3µm
Ink thickness	1.2 ± 0.2µm

Recommended industries

Automotive · Food & beverage · Health & beauty · Pharma & healthcare · Outdoor · Chemicals · Electronics

R396

HIGH SPEED DURABLE RESIN

EASY-TO-PRINT, HIGH-SPEED COMPATIBLE RESIN FOR DURABLE FLEXIBLE PACKAGING APPLICATIONS

Performance characteristics

- Extremely high print speeds up to 32 IPS (660mm per second)
- Excellent edge definition for dark, dense images and improved scan rates
- Abrasion & smudge resistance resistance
- Anti-static back coating for easy handling and extended printhead life
- Halogen-free

Technical Product Information

Ink	Resin
Colour	Black
Total thickness	5.45 ± 0.9µm
Base film thickness	4.0 ± 0.5µm
Ink thickness	1.45 ± 0.4µm

Recommended industries

Food & beverage · Health & beauty · Pharma & healthcare

Recommended substrates
Find out the recommended substrates for each ribbon on pages 05-06

TR3020

TRANSPARENT WAX

SPECIALTY WAX FOR MAKING ROUGH SURFACES THERMAL TRANSFER PRINTABLE OR LAMINATING PRINT FOR EXTRA PROTECTION

Performance characteristics

- Improves the resistance of printed images
- Prints up to 12 IPS
- Can improve the smoothness and printability of label materials
- Halogen-Free

Technical Product Information

Ink	Wax
Colour	Transparent
Total thickness	8.2 ± 0.9µm
Base film thickness	4.8 ± 0.3µm
Ink thickness	3.4 ± 0.6µm

Recommended industries

Inventory & logistics

Pharma & healthcare

TR3021, 22, 23

GENERAL PURPOSE COLOUR WAX

ALL-ROUND COLOUR WAX SPECIALTY APPLICATIONS

Performance characteristics

- Provides excellent print clarity and is highly smudge resistant
- Prints at high printing speeds (12 IPS) delivering crisp, rotated bar codes
- Excellent edge definition for dark, dense images and improved scan rates
- Anti-static back coating for easy handling and extended printhead life
- Halogen-free (TR3022 Blue)

Technical Product Information

Ink	Wax
Colour	Red, Blue, Green
Total thickness	8.4 ± 0.5µm
Base film thickness	4.8 ± 0.3µm
Ink thickness	3.6 ± 0.2µm

Recommended industries

Inventory & logistics

Outdoor

M295C

PRINT ON PACKAGING COLOUR WAX/RESIN

SPECIALTY COLOURED NEAR-EDGE WAX/RESIN FOR HIGH-SPEED PRINTABILITY ON FLEXIBLE PACKAGING

Performance characteristics

- Extremely high print speeds up to 20 IPS (508mm per second)
- Excellent edge definition for dark, dense images and improved scan rates
- Anti-static back coating for easy handling and extended printhead life
- Halogen-free

Technical Product Information

Ink	Wax/Resin	
Colour	Silver, Bright White	
Total thickness	Silver	6.1 ± 1.0µm
	Bright White	7.5 ± 1.3µm
Base film thickness		4.5 ± 0.5µm
Ink thickness	Silver	1.6 ± 0.5µm
	Bright White	3.0 ± 0.8µm

Recommended industries

Food & beverage

Health & beauty

Pharma & healthcare

Recommended substrates
Find out the recommended substrates for each ribbon on pages 05-06

R300 RED

GENERAL PURPOSE COLOUR RESIN

SPECIALTY COLOUR RESIN FOR SYNTHETIC LABEL PRINTING APPLICATIONS REQUIRING DURABILITY

Performance characteristics

- Excellent print quality at high speeds using less print energy
- Excellent durability and chemical resistance
- Extensive substrate versatility expanding application options
- Unbeatable edge definition for red, dense images and improved scan rates
- Anti-static back coating for easy handling and extended printhead life

Technical Product Information

Ink	Resin
Colour	Red
Total thickness	6.0 ± 0.5µm
Base film thickness	4.8 ± 0.3µm
Ink thickness	1.2 ± 0.2µm

Recommended industries

Automotive, Food & beverage, Health & beauty, Inventory & logistics, Pharma & healthcare, Outdoor, Chemicals, Electronics

R410D-WHITE

ULTRA OPAQUE WHITE RESIN

DOUBLE LAYER WHITE RESIN DESIGNED FOR DARK MATERIAL PRINTING FOR DURABLE APPLICATIONS

Performance characteristics

- Excellent optical density (Macbeth)
- Excellent opacity
- Excellent scratch resistance
- Good solvent resistance
- Anti-static back coating for easy handling and extended printhead life

Technical Product Information

Ink	Resin
Colour	White
Total thickness	11.2 ± 1.0µm
Base film thickness	4.8 ± 0.3µm
Coated layers	6.4 ± 0.7µm

Recommended industries

Electronics, Automotive, Chemicals, Pharma & healthcare

R510C

ULTRA DURABLE COLOUR RESIN

SPECIALTY COLOUR RESIN FOR APPLICATIONS EXPOSED TO DEMANDING ENVIRONMENTS

Performance characteristics

- High solvent durability
- Excellent optical density (Macbeth) printing ensuring high edge definition
- Anti-static back coating for easy handling and extended printhead life

Technical Product Information

Colour: Red, Blue, Green, Matte Silver,

Yellow, Orange, Deep Blue, Deep Green

Recommended industries

Automotive, Inventory & logistics, Chemicals, Electronics

R510W

DURABLE WHITE RESIN

SINGLE LAYER WHITE RESIN DESIGNED FOR DARK MATERIAL PRINTING FOR HIGHLY DURABLE APPLICATIONS

Performance characteristics

- Industry leading in edge definition for clean, durable, and dense bar codes
- Resistance to ethanol and isopropanol
- Abrasion and smudge resistance
- Anti-static back coating for easy handling and extended printhead life
- Halogen-free

Technical Product Information

Ink	Resin
Colour	White
Total thickness	9.3 ± 0.5µm
Base film thickness	4.8 ± 0.3µm
Ink Thickness	4.5 ± 0.2µm

Recommended industries

Food & beverage, Inventory & logistics, Electronics, Chemicals

Recommended substrates
Find out the recommended substrates for each ribbon on pages 05-06

TR3370

HIGH OPACITY WHITE RESIN

WHITE OPAQUE RESIN DESIGNED FOR DARK MATERIAL PRINTING FOR HIGH DURABILITY APPLICATIONS

Performance characteristics

- An opaque ribbon that prints well on black, clear, and silver synthetic substrates
- Specially formulated for shrink tubing applications
- Resistant to ethanol and isopropanol
- Abrasion and smudge resistance
- Anti-static back coating for easy handling and extended printhead life
- Halogen-free

Technical Product Information

Ink	Resin
Colour	White
Total thickness	9.6 ± 0.5µm
Base film thickness	4.8 ± 0.3µm
Ink thickness	4.8 ± 0.2µm

Recommended industries

Food & beverage · Inventory & logistics · Electronics · Chemicals

VR301

DURABLE METALLIC COLOUR RESIN

SPECIALTY METALLIC RESIN FOR SMOOTH SURFACES REQUIRING HEAT AND CHEMICAL SOLVENT RESISTANCE

Performance characteristics

- Abrasion and smudge resistance
- Excellent optical density (Macbeth)
- Extreme solvent resistance
- Anti-static back coating for easy handling and extended printhead life

Technical Product Information

Ink	Resin
Colour	Metallic Gold or Silver
Total thickness	7.15 ± 0.7µm
Base film thickness	5.7 ± 0.3µm
Ink thickness	1.45 ± 0.4µm

Recommended industries

Automotive · Inventory & logistics · Outdoor · Chemicals · Electronics

Recommended substrates
Find out the recommended substrates for each ribbon on pages 05-06

R395

TEXTILE RESIN

ESPECIALLY DESIGNED FOR CARE FABRIC APPLICATIONS REQUIRING HEAT, WATER AND STEAM RESISTANCE

Performance characteristics

- Dry clean and laundry safe
- Heat and steam resistance
- Water resistance
- Abrasion and smudge resistance
- Printable on both flat-head and near-edge printers
- Halogen-free

Technical Product Information

Ink	Resin
Colour	Black
Total thickness	6.3 ± 0.5µm
Base film thickness	4.5 ± 0.5µm
Ink thickness	1.8 ± 0.5µm

Recommended industries

Textile

UV TRANSPARENT RESIN

UNIQUE R300 FORMULATION-BASED HIGHLY DURABLE CLEAR RESIN FOR ANTI-COUNTERFEIT APPLICATIONS

Performance characteristics

- Print glows under UV-blacklight
- Good compatibility with filmic labels or cards
- Printable on glossy paper
- Printable on flat-head and near-edge printers

Special storage conditions

Avoid any light (both sunlight and electric light) as much as possible

Technical Product Information

Ink	Resin
Colour	Transparent
Total thickness	6.2 ± 0.8µm
Base film thickness	4.8 ± 0.3µm
Ink thickness	1.4 ± 0.5µm
Light wave length	365 nm

Recommended industries

Automotive Electronics

HOLOGRAM RESIN

SPECIALTY RESIN RIBBON FOR ANTI-COUNTERFEIT PURPOSES FOR HIGHLY DURABLE APPLICATION

Technical Product Information

Ink	Resin
Colour	Rainbow, large dots
Total thickness	7.4 ± 0.8µm
Base film thickness	6.0 ± 0.4µm
Ink thickness	1.3 ± 0.5µm

SINTERING RESIN

SPECIALTY SINTERING RIBBON FOR EXTREME HEAT RESISTANCE OF UP TO 1200°C AFTER HAVING GONE THROUGH THE SINTERING PROCESS

Technical Product Information

Ink	Special
Colour	Black
Total thickness	10.1 ± 1.6µm
Base film thickness	4.65 ± 0.4µm
Ink thickness	5.45 ± 1.2µm

Special handling conditions

The printed substrate achieves high resistance only once exposed to at least 425°C to ensure the sintering process has taken place.

SCRATCH-OFF RESIN

EASY TO SCRATCH OFF RESIN RIBBON FOR SPECIALTY APPLICATIONS LIKE LOTTERY TICKETS AND GIFT CARDS

Technical Product Information

Ink	Special
Colour	Black on silver
	●
Total thickness	10.1 ± 1.6µm
Base film thickness	6.0 ± 0.5µm
Ink thickness	4.45 ± 1.0µm

Recommended substrates
Find out the recommended substrates for each ribbon on pages 05-06

COMPLIANCE OVERVIEW

Ribbon	REACH	RoHS	ISEGA	Halogen-free	GHS / BS5609	FDA	BPA-free	Conflict - mineral free	Latex-free	UL
TR4085plus® | Resin enhanced wax	✔	✔	✔	✔		✔	✔	✔	✔	✔
MP Wax | Standard wax	✔	✔	✔	✔		✔	✔	✔	✔	
M255 | Premium wax/resin	✔	✔	✔	✔		✔	✔	✔	✔	
M265 | Ultra durable wax/resin	✔	✔	✔			✔	✔	✔	✔	
TR5080 | Specialty wax/resin	✔	✔	✔	✔		✔	✔	✔	✔	✔
TR6080 | High performance wax/resin	✔	✔	✔	✔		✔	✔	✔	✔	
V300 | Versatility Defined resin	✔	✔	✔			✔	✔	✔	✔	✔
R300 | General purpose resin	✔	✔	✔		✔	✔	✔	✔	✔	✔
R510 | Ultra durable resin	✔	✔	✔	✔		✔	✔	✔	✔	✔
R316 | Heat resistant resin	✔	✔				✔	✔	✔	✔	✔
R550 | Extremely durable resin	✔	✔	✔	✔		✔	✔	✔	✔	✔
TR7541 | Boiling resistant resin (also NE)	✔	✔	✔	✔		✔	✔	✔	✔	
M295HD | High density print-on-packaging wax/resin	✔	✔	✔	✔		✔	✔	✔	✔	
M295HD 4.0 | X-tra Long high density print-on-packaging wax/resin for extra length	✔	✔	✔	✔		✔	✔	✔	✔	
TR4500 | Premium wax/resin	✔	✔	✔	✔		✔	✔	✔	✔	✔
R390 | General purpose resin	✔	✔	✔			✔	✔	✔	✔	
R396 | High speed durable resin	✔	✔	✔	✔		✔	✔	✔	✔	
TR3020 | Transparent wax	✔	✔		✔		✔	✔	✔	✔	
TR302X | General purpose colour wax	✔	✔		✔ (Blue)	✔ (Red)	✔	✔	✔	✔	
M295C | Print-on-packaging colour wax/resin	✔	✔	✔ (White)	✔ (White)		✔	✔	✔	✔	
R300 Red | General purpose colour resin	✔	✔	✔				✔	✔	✔	
R410D-White | Ultra opaque white resin	✔	✔					✔	✔	✔	✔
R510C | Ultra durable colour resin	✔	✔			✔ (Red)	✔	✔	✔	✔	✔*
R510W | Durable white resin	✔	✔	✔	✔		✔	✔	✔	✔	✔
TR3370 | High opacity white resin	✔	✔		✔		✔	✔	✔	✔	✔
VR301 | Durable metallic colour resin	✔	✔				✔	✔	✔	✔	
R395 | Textile resin	✔	✔		✔		✔	✔	✔	✔	
UV transparent resin	✔	✔				✔	✔	✔	✔	
Hologram resin	✔	✔				✔	✔	✔	✔	
Scratch-off resin	✔	✔					✔	✔		

*Blue, Green, Red

PURCHASING GUIDE

Request a free sample

Are you interested in trying out one of our Thermal Transfer Ribbons? You can request a free sample via email or the following QR code below.

Order DNP Thermal Transfer Ribbons

Are you a first-time customer and you wish to send in an order to us? You can send your request to sales@dnp.imgcomm.eu and one of our sales representatives will get in touch with you regarding your order.

Buy stock items via the Blue Book Programme

Is lead time a key factor for you? With our Blue Book Programme orders received before 12 o'clock (CET/CEST) are shipped out the same day! The Blue Book Programme contains standard qualities and size specifications. You can find a list of our Blue Book items on our website here: eu.dnpribbons.com/products/blue-book or by following the QR code below.

How to order from Blue Book?

1 Place an order before 12 o'clock (CET/CEST) for same day shipment.
2 Send your Blue Book order in a separate e-mail from your made-to-order request.
3 Your products will be prepared and shipped out that day.

Please note that delivery costs may vary per country. In case you would like your order to be sent by drop shipment an additional cost of €20 per delivery applies.

Consult with our industry experts

Do you still have unanswered questions? Get in touch with your designated Area Sales Manager, call our general sales line (+31 23 553 3060) to talk to one of our knowledgeable specialists or send us an email to sales@dnp.imgcomm.eu.

Supplied via resellers, DNP partner distributors and OEM's

DNP Thermal Transfer Ribbons are available for purchase via a network of partner distributors, OEM's and resellers. Should you be interested in becoming one of the aforementioned partners, please do not hesitate to contact us.

Are you a ribbon user yourself and would like to try out or purchase one of our DNP Thermal Transfer Ribbons? Our team is ready to answer your questions and needs, to discuss your projects and, if required, point you to the most suitable DNP reseller.

The information in this brochure was obtained in DNP laboratories. Measured values may vary slightly when tested in a different environment. Information contained within this document is subject to change without notification.

To enhance knowledge and culture through letterpress printing, Dai Nippon Printing Co., Ltd.'s predecessor, Shueisha was founded in the Ginza district of Tokyo in 1876. Since then, Dai Nippon Printing (DNP) has become one of the world's largest diversified printing/coating technology companies.

Today, Dai Nippon Printing employs over 38.600 people at its plants and sales offices in Asia, Europe, North America and Oceania. DNP's operations include commercial printing, packaging, decorative materials, electronics, business forms and information media supplies.

In the early 1980s, Dai Nippon Printing was one of the pioneers in Thermal Transfer Ribbon (TTR) technology. Nearly 30 years later, in 2008, Sony Chemical's TTR division was transferred to Dai Nippon Printing. With the merge of Sony Chemical's TTR division, DNP's Imagingcomm division was established. Thereby, also founding DNP Imagingcomm Europe B.V. DNP's Imagingcomm division has ever since grown to be one of the world's largest manufacturers of Thermal Transfer Ribbons for barcode and dye-sublimation printers. Our European division provides solutions to the barcode, label, photo, ID- and credit card industries in the European, Middle Eastern, African and Russian markets.

大日本印刷（DNP）の前身、秀英舎は、明治維新後まもない1876年（明治9年）、東京・銀座の地に誕生しました。「活版印刷を通じて人々の知識や文化の向上に貢献したい」。創業の原動力になったのは、発起人たちのそんな熱い思いでした。現在では、DNPは世界最大規模の総合印刷会社になっています。
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