



## R316 SPECIALTY RESIN Thermal Transfer Ribbon

### Product Description

R316 is unique in the industry – the best resin ribbon for printing on paper and synthetic paper substrates. It is able to withstand environmental temperatures of up to 220°C (428°F) making it perfect for applications like heat tunnel passage. R316 uses remarkably low print energy settings while producing high quality heat resistant bar codes. This ribbon's design incorporates DNP's standard anti-static and back coat properties that protect the print head, and also prints with DNP's unmatched Edge Definition™ – producing clean, extremely durable, dense bar codes every time.

### Recommended Applications



SHRINK WRAP



TEXTILE



HORTICULTURE



HEALTHCARE



PHARMACEUTICAL

### Recommended Substrates

Coated paper, synthetic paper, polyethylene, polypropylene, polyolefin, Kimdura®, Valeron®, Polyart®

### Performance Characteristics

- Recommended for use in extreme heat applications
- Compatible with paper and synthetic paper
- Remarkably low print energy used to create high quality harsh environment bar codes
- Anti-static for easy handling and extended print head life
- Industry leading in Edge Definition™ for clean, durable, and dense bar codes
- Available in colors and metallics
- DNP's specialty formulated back coating for print head protection

### THE DAI NIPPON PRINTING GROUP

DNP is the largest manufacturer of thermal transfer ribbons for facsimile machines, bar code and dye-sublimation printers. DNP is also the world's largest diversified printing/coating technologies company. At its 40 plants, both in Japan and overseas, DNP's operations include commercial printing, packaging, decorative materials, electronics, business forms and information media supplies. DNP is a Global Fortune 500 company with \$13 billion in annual revenue.

#### PRODUCTS

##### WAX

- W110 General Purpose Wax
- W137 Premium Plus Wax

##### WAX/RESIN

- M250 Premium Plus Wax/Resin

##### RESIN

- R300 General Purpose Resin
- R316 Specialty Resin
- R340 Permanent Care Resin
- R510 Ultra Durable Resin

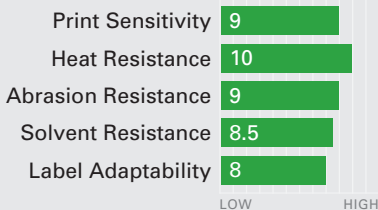
##### NEAR EDGE

- W190 Near Edge Wax
- M290 Near Edge Wax/Resin
- R390 Near Edge Resin

##### COLORS & METALLICS

- W120C General Color Wax
- R316C Specialty Color Resin
- R510C Durable Color Resin

#### R316 PROPERTIES



### Contact DNP

1.800.814.4672

www.dnpribbons.com

RESIN

THE WORLD'S LARGEST THERMAL  
TRANSFER RIBBON MANUFACTURER

TECHNICAL DATA SHEET

## RIBBON SPECIFICATIONS

DESCRIPTION	TECHNICAL SPECIFICATIONS
Ink	Resin
Color	Black, Colors, Metallics
Ink Thickness	3.2 ± 0.4μ
Base Film Thickness	4.5μ
Ribbon Thickness	9.8 ± 0.7μ
Ink Melting Point	82°C – 84°C (179.6°F – 183.2°F)
Print Density	>1.8

## PERFORMANCE OF PRINTED IMAGE

DESCRIPTION	TECHNICAL SPECIFICATIONS
Tested Substrate	Fasson® Trans-Therm® IC
Test Method	Crockmeter
Abrasion Resistance Test	1000 cycles @ 900g covered with cloth*
Solvent Resistance Test	WATER 1000 cycles @ 248g covered with cloth*
	KEROSENE 200 cycles @ 248g covered with cloth*
	IPA 80 cycles @ 248g covered with cloth*
Heat Resistance	<220°C (<428°F)
Print Speed Range	2 to 12 IPS

## CONVERSION CHART

mm to in.	(mm ÷ 25.4)	in. to mm	(in. ÷ 0.03937)
m to ft.	(m ÷ 0.3048)	ft. to m	(ft. ÷ 3.2808)
C° to F°	[(1.8 × C°) + 32]	F° to C°	[(F° ÷ 1.8) – 17.777]
in. to m	(MSI ÷ 0.645)	m <sup>2</sup> to MSI	(m <sup>2</sup> × 0.645)

## RIBBON STORAGE CONDITIONS

Temperature	5°C to 35°C (41°F to 95°F)
Humidity	10% to 85% relative humidity
Light	Avoid direct sunlight

Quality Systems  
ISO Registered

\*Highest number of cycles where ANSI grade A can still be scanned.  
All information on data sheet generated at DNP laboratories worldwide. DNP reserves the right that measured values may vary slightly when tested under different environments. Information subject to revisions without notification.

F-3160301

## RESIN

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# DNP

The Dai Nippon Printing Group

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