



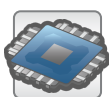
## Thermal Transfer Ribbon Technical Data Sheet

### R316 Specialty Heat Resistant Resin

#### Product Description

R316 is unique in the industry — the best resin ribbon for printing on coated and synthetic paper substrates. It is also 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 backcoat properties that protect the printhead, and also prints with DNP's unmatched Edge Definition™ producing clean, extremely durable, dense bar codes every time.

#### Recommended Applications



CIRCUIT BOARD



HEALTHCARE



HORTICULTURE



MEDICAL DEVICES



OUTDOOR



PHARMACEUTICAL



SHRINKWRAP

#### Recommended Substrates

Coated & synthetic papers, polypropylene, polyethylene, polyolefin, Kimdura®, Valeron®, Polyart®, Krome-Kote, Matte Kapton®

#### Performance Characteristics

- Recommended for use in extreme heat conditions
- Compatible with coated and synthetic paper
- Remarkably low print energy used to create high quality harsh environment bar codes
- Anti-static for easy handling and extended printhead life
- Industry leading in Edge Definition™ for clean, durable, and dense bar codes
- DNP's specially formulated backcoating for printhead protection

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



Registered to  
ISO 9001

REV 3-13-09

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## Thermal Transfer Ribbon Technical Data Sheet

### R316 Specialty Heat Resistant Resin

#### Ribbon Properties

Description	Result	Test Method
Ink	Resin	
Color	Black	Visual
Total Thickness	7.8 ± 0.5μ	Micrometer
Base Film Thickness	4.8 ± 0.3μ	Micrometer
Ink Thickness	3.0 ± 0.2μ	Micrometer
Ink Melting Point	127°C (260°F)	Differential Scanning Calorimeter

#### Durability of Printed Image

Label Stock: Top-coated Polyester

Print Speed: 6 IPS

Description	Result	Test Method
Print Density	> 1.80	Densitometer
Smudge Resistance	A*	Colorfastness Tester - 100 Cycles @ 500 Grams with Cotton Cloth
Scratch Resistance	A*	Colorfastness Tester - 50 Cycles @ 200 Grams with Stainless Steel Pointed Tip

\*American National Standard Institute (ANSI) Grade Levels A, B, C, D, and F, where A is excellent, B is above average, C is average, D is below average, and F is poor.

#### Conversion Chart

Millimeters (mm) to Inches = mm ÷ 25.4	Inches to Millimeters (mm) = Inches ÷ 0.03937
Meters (m) to Feet (ft) = m ÷ 0.3048	Feet (ft) to Meters (m) = Feet ÷ 3.2808
C° to F° = (1.8 X C°) + 32 = F°	F° to C° = (F° ÷ 1.8) - 17.77
Thousand square inches (MSI) to m <sup>2</sup> = MSI X 0.645	MSI = m <sup>2</sup> ÷ 0.645

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