

5100 Premium Resin


Available
from stock
on ZipShip

Ribbon	Ribbon Type		Compatible Material	Print Speed	Temperature Resistance	Smear/Scratch Resistance	Chemical Resistance
2300	Wax	Standard	Uncoated/Coated Paper				
2100	Wax	High-Performance	Uncoated/Coated Paper				
3400	Wax/Resin	High-Performance	Uncoated/Coated Paper Matte Synthetics				
3200	Wax/Resin	Premium	Uncoated/Coated Paper Matte Synthetics				
4800	Resin	Performance	Matte/Gloss Synthetics				
5095	Resin	High-Performance	Matte/Gloss Synthetics				
5100	Resin	Premium	Matte/Gloss Synthetics				
Image Lock™	Resin	Specialist	Z-Xtreme™ 5000T				

Additional Features

- Premium resin ribbon for use on matte and gloss synthetics which provides excellent print quality and durability
- Ultra high temperature resistance in combination with Z-Supreme label material
- Exceptional extreme chemical and outdoor element resistance
- Excellent smear and scratch resistance on both matte and gloss synthetics

Suggested Applications

- High temperature and harsh environments that require excellent print quality, print durability and label performance
- Printed circuit board applications
- Laboratory slide labelling
- Replacement for laminate labels
- Labelling applications requiring extreme resistance to harsh chemicals

UL Recognised and CSA Certified

UL and CSA approved for use with the following materials:

- Z-Ultimate™ 3000T White
- Z-Ultimate™ 3000T Silver
- Z-Xtreme™ 4000T White
- Z-Xtreme™ 4000T White High-Tack
- Z-Xtreme™ 4000T Silver High-Tack



UL approved for use with the following materials:

- Z-Ultimate™ 2500T White
- Z-Ultimate™ 3000T Yellow
- Z-Ultimate™ 3000T High-Tack
- Z-Supreme™ 4000T White
- Z-Supreme™ 4000T White ESD
- Z-Supreme™ 4200T Yellow



Ribbon Compliance

Compliance	Image Lock
REACH/ Substances of Very High Concern (SVHC)	✓
RoHS	✓
Dodd-Frank Act (Conflict Minerals)	
Toxic Substances Control Act of 1976	✓
Carcinogenic, Mutagenic and Reprotoxic, or Substances Toxic Substances 1976/769/ EC	
California Proposition 65	
FDA 21 CFR Part 175.300 – Indirect Food Contact – Resinous and Polymeric Coatings	
European Food Directive 1935/2004/EC	
Foodstuffs and Consumer Goods Act and LFGB approved	
Halogen free	
Latex free	
Animal derivatives free	
BP Free	✓

Technical Specifications

	Description
Colour	Black
Base Film	Polyester
Base Film Caliper	4.5 microns
Total Caliper	6.6 microns $\pm 10\%$
Scanning Capabilities	IR and Visible Light

Stocked Sizes Available for the following Zebra Printers:

Mid-range and high-performance thermal printers, Zebra engines, other legacy Zebra printers
(Other widths/lengths are available on request subject to minimum order quantities and lead times)

Recommended Storage Conditions:

1 year duration when stored at 5°C to 35°C at 45% to 85% RH

5100 Barcode Scannability

The below scannability testing was performed on a variety of mid-range and high-performance thermal printers.

Label Facestock	Print Speed	Barcode	Lab Results
Synthetics	Up to 152.4mm/sec	10 or 12 mil normal code	Typical ANSI Grade A
Synthetics	Up to 101.6mm/sec	15 mil normal code	Typical ANSI Grade B



Performance Analysis

All of the below tests were performed on Z-Xtreme™ 4000T White using 10 cycles (20 rubs) with the Crockmeter.

Test Solvents	Zebra 5100 Performance
Glass Cleaner w/Ammonia	✓
Formula 409	✓
Skydrol	^
Motor Oil	✓
Brake Fluid	✓
Gunk Degreaser	✓
WD-40	✓
Genesolv	
Rho-Tro	
Hexane	✓
Xylene	^
Gasoline	^
Acetone	
Alcohol (90% Isopropyl Alcohol)	✓

✓: Scanning received a “B” ANSI grade or above.

^ : Scanning received a “C” to “F” ANSI grade.

Blank: Barcode does not scan

Product Performance and Suitability

The information contained in this document is to be used for guidance only and is not intended for use in setting specifications. All purchasers of Zebra products shall be solely responsible for independently determining if the product conforms to all requirements of their unique application.

All products should be pre-tested to ensure they meet all intended requirements of specific end-use applications.

For testing of this ribbon on Zebra mid-range and high-performance printers please order part number 05100BK11005. For testing on other printer models, please contact your Supplies Specialist representative.



5100 Resin Ribbon

Premium resin ribbon providing excellent edge definition, combined with exceptional abrasion and solvent resistance

The Zebra 5100 Resin Ribbon is a premium solution designed for applications requiring exceptional durability and print clarity. It offers outstanding abrasion and solvent resistance across a wide variety of substrates, ensuring long-lasting label performance in challenging environments. This ribbon is particularly skilled at producing extremely dense barcodes and high-resolution graphics, thanks to its excellent edge definition.

Its unique resin base provides robust resistance to outdoor elements and chemical solvents, making it an ideal choice for industries that demand resilient labeling solutions. With the Zebra 5100, users can expect reliable and precise printing for critical applications.



Excellent chemical and temperature resistance

Our high-performance resin ribbon formulation produces images that are resistant to most harsh environments when printed on Zebra's synthetic label and tag materials — including smearing, moisture, abrasion, extreme temperatures and chemicals.

Resin Ribbons

Unmatched Print Quality and Durability. Ideal for use:

- With all synthetic materials and some top-coated labels and tags
- In environments with harsh to extreme exposure to chemicals
- When applications require strong resistance against ultra-high temperatures and harsh outdoor environments

Comprehensive choice

Every year, Zebra supplies many million square meters of ribbon to Europe, Middle East and Africa, and the Americas. Comprehensive product choice means you'll always be able to find the right printer ribbon for your specific requirements. We hold around 140 different ribbon items for Zebra printers in stock — all available for immediate delivery via ZipShip, our dedicated stocked supplies solution.

The perfect companion for your Zebra labels, tags and printer

Not all thermal ribbons are created equal. There are hundreds of different ribbon formulations in the market. That is why Zebra's Supplies R&D Team has tested and selected only those ribbons that deliver the best print quality and durability. To get the Zebra name, each ribbon must pass a series of print quality and durability tests.

When you purchase Zebra thermal ribbons you can rest assured that the:

- Print will be readable and scannable every time.
- Print will withstand the environment in which it will be used in.
- Backcoating will not cause premature printhead failure.

5100 Resin Ribbon—UL certified ribbon, with excellent edge definition combined with exceptional abrasion and solvent resistance.

For more information, please visit www.zebra.com/ribbons

Specifications

Technical Specifications	
Color	Black
Ink Formulation	Resin
Base Film	Polyester
Base Film Caliper	4.5 microns
Total Caliper	6.6 microns +/- 10%
Scanning Capabilities	IR and Visible Light
Product Performance and Suitability	
Recommended storage conditions (before use)	72° F (22° C) at 50% RH
Expected Shelf Life	1 Year
Sample Part Number	05100BK08305
UL/cUL Certified Materials with this Ribbon	
Z-Supreme 2000T - UL Recognized Z-Supreme 3000T - UL Recognized Z-Supreme 4000T - UL Recognized Z-Ultimate® 4000T White & Silver - UL Recognized Z-Ultimate® 4000T Removable - UL Recognized Z-Ultimate® 4000T High-Tack - UL Recognized Z-Ultimate® 3000T White & Silver - UL Recognized Z-Ultimate® 2000T White - UL Recognized Z-Xtreme 4000T White & Silver - UL Recognized Z-Xtreme 4000T High-Tack White & Silver - UL Recognized	
Ribbon Compliance	
REACH RoHS WEEE IEC 61249-2-21 Halogen Free	
Stocked Sizes Available for Zebra Printers	
P4T, desktop, mid-range and high-performance thermal printers, Zebra engines, other legacy Zebra printers. Other widths/lengths are available on request subject to minimum order quantities and lead times	
Material Testing in End Application	
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Markets and Applications

- High temperature, harsh environments requiring excellent print quality, print durability and label performance
- Printed circuit board applications
- Replacement for laminated labels
- Labeling applications requiring extreme resistance to chemicals