

# High-Bonding Specialty RFID Label

## Thermal Transfer Polyester Label with Zebra ZBR2000 Inlay

RFID labels are critical to achieve the real-time visibility needed to streamline operations, minimize errors in asset-related data, as well as track, identify and maximize asset utilization. However, there are surfaces, such as those that are painted, wood, glass and high surface energy plastics that are challenging to reliably identify, especially if you need them to stay adhered for years. Zebra's new thermal transfer polyester label with our ZBR2000 inlay features a high-bonding adhesive that enables strong initial adhesion to these challenging surfaces. The thermal transfer polyester material remains readable and durable against many chemicals, power washing and even in outdoor environments, making it the optimal choice for the toughest of environments. Our cost-effective ZBR2000 inlay is optimal for most applications and features a high sensitivity chip offering read ranges up to 17m in free space.



### High, ultimate bond to challenging surfaces

The specialty high-bonding adhesive provides outstanding adhesion to painted assets, wood, glass, and high surface energy plastics with bond strength increasing over time. It has excellent resistance to high temperatures, humidity, hot/cold cycles, as well as chemicals and provides some initial repositionability for placement accuracy.

### Polyester material and resin ribbon ensures durable print in direct outdoor exposure

Zebra's polyester label combined with our 5095 resin ribbon produces scratch resistant human-readable print that will not fade or become unreadable for up to 2 years outdoors.

### High performance inlay delivers excellent read ranges

Featuring ZBR2000, Zebra's high sensitivity Auburn ARC certified inlay, you can achieve read ranges of up to 17m in free space\*.

### Supports recommendations in VDA 5520 and requirements of ISO 3779

Zebra's RFID high-bonding RFID label supports the implementation of RFID per the German Association of the Automotive Industry's (VDA) recommendations in VDA 5520 - RFID in Vehicle Distribution Processes, which considers the specifications and requirements laid down in ISO 3779 – Road Vehicles – Vehicle Identification Numbers (VIN).

### Application customization backed by unmatched RFID expertise

Zebra is your trusted expert in all things RFID. Zebra can consult with you to identify the optimal label material, adhesive, thermal ribbon and inlay considering key requirements such as read range and longevity. We offer end-to-end RFID solutions – including pre-tested RFID supplies made with the right materials and adhesives, along with the highest-performing inlays and chips – customized for your application. We have played a central role in pioneering RFID technologies and defining global standards since the mid-1990's, when smart-label technology first appeared. We hold more than 575 RFID patents and numerous industry firsts in RFID.

### Print Confident. Print Quality. Print Zebra

Our materials and inlays have been pre-tested to ensure quality and durable print, industry-leading read performance, reliable encoding, low instance of printer voids, as well as minimal printer wear and tear. Zebra is ISO 9001 certified and adheres to consistent processes to reduce instances of unsuccessful encoding, adhesive ooze and reliable label performance. No matter when you order, you can count on the same consistent performance.

Reliably track assets with challenging surfaces with Zebra's High-Bonding RFID Label. For more information, please visit [www.zebra.com/rfidlabels](http://www.zebra.com/rfidlabels)

# Specifications

Material Construction	
Facestock	Thermal transfer matte white polyester 50 microns
Adhesive	Temporarily repositionable high-bond permanent acrylic adhesive 50 microns
Liner	Glassine liner 65 microns
ZBR2000 Inlay <sup>1</sup>	62 microns
Total Thickness (+/- 10%)	227 microns
Environment	Indoor and outdoor use
Temperature Performance	
Minimum Application Temperature	21°C to 38°C (70°F to 100°F) <sup>2</sup>
Service Temperature Range	-4°F to 300°F/-40°C to 149°C
Recommended Printers and Ribbons	
Printers	Thermal transfer printer (ribbon required); use Zebra desktop, mid-range and high-performance thermal printers for optimal performance
Ribbons	Zebra 5095 resin ribbon
Adhesive Strength <sup>3</sup>	
Glass	72 hour dwell time: 90 oz/in
Steel	15 minute dwell time: 49 oz/in 72 hour dwell time: 92 oz/in
Polycarbonate	72 hour dwell time: 71 oz/in
Regulatory and Compliance	
Supports recommendations in VDA 5520 and requirements of ISO 3779	
Product Performance and Suitability	
One year when stored at 23°C at 50% RH requirements of ISO 3779	
Warranty	
Supplies are warranted against defects in workmanship and materials for a period of 1 (one) year from the date of shipment. For the complete warranty statement, please visit: <a href="http://zebra.com/warranty">zebra.com/warranty</a> .	
Material Testing in End Application	
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.	
Footnotes	
<sup>1</sup> See Zebra ZBR2000 Inlay Specification Sheet for full inlay specifications	
<sup>2</sup> Application to surfaces at temperatures below 10°C (50°F) is not recommended.	
<sup>3</sup> Method: ASTM D3330;90° Peel Adhesion	

## Markets and Applications

### Logistics

- Pallet, Freight: painted, wood, glass and high surface energy plastic shipping containers

### Manufacturing

- Automotive windshields

### Other

- Asset Tracking: painted items, wood, glass and high surface energy plastics



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