



# Selector Guide Genuine Zebra™ Supplies



SEE MORE. DO MORE.



Not all thermal labels are created equal. Purchasing genuine Zebra supplies means you have access to a large selection of quality, pre-tested, supplies manufactured by a thermal industry expert, reducing your risk of non-compliance.

## Quality

- Zebra uses consistent processes and materials
  - ISO 9001:2008 certified
  - We never substitute materials, ensuring consistent print quality
  - Materials are selected to ensure we deliver consistent high-quality products.

## Pre-Tested

- Zebra extensively tests all materials we offer in Zebra printers

- Testing includes print quality, chemical resistance, adhesive strength and printer wear and tear.

## Reliable

- Expertise in converting thermal media.
  - Zebra is one of the largest thermal label converters in North America.
  - We use inks, varnishes, tooling, equipment and inspection techniques specifically suited for the special requirements of thermal materials.
  - Zebra can custom-manufacture supplies that meet the needs of most applications, whether a specialty material, size, configuration or pre-print is needed.

## Key Applications

**Retail / Shelf-labeling,**  
Markdown, Pharmacy, Item  
Labeling and Tagging

**Healthcare / Patient Identification,**  
Specimen Collection, Lab  
Specimen Processing

**Transportation and Logistics /**  
Shipping, Pallet Labeling,  
Packing Lists

**Manufacturing / Product**  
Identification, Work-in-Process,  
Parts Identification

## WHY CHOOSE GENUINE ZEBRA™ SUPPLIES?

Meet end-user needs and requirements with genuine Zebra supplies. With access to over **1,000 combinations** of high-quality labels, tags, receipt paper, wristbands and ribbons, in addition to **500 stock ZipShip<sup>SM</sup>** products, you will be able to meet the durability requirements of most applications. In addition, Zebra has:

- **4 U.S. locations**, ensuring quick delivery.
- **Inventory management programs** that improve cost and delivery time.
- A **printhead protection program** that awards end-users who purchase genuine Zebra supplies with free printheads.
- **Extensive manufacturing capabilities**, which include laminating, perforations, face and back slits, custom sizes and color pre-printing.
- An **experienced Supplies R&D team** who pre-tests all materials on Zebra® printers and conducts additional testing to ensure it will meet the needs of the application.
- **ISO 9001:2008 registered**, which ensures you'll always receive consistent, quality products.



With more than 1,000 combinations of high-quality and reliable labels, tags, receipt paper, wristbands, and ribbons, Zebra has a media solution for virtually any application. Whether you're facing shipping, electronic component manufacturing, prescription labeling, or even electronic citation applications, Zebra and our certified partners can provide an in-stock or custom-made solution for you.

### Custom Supplies

We specialize in manufacturing supplies to meet the exact requirements of an end-user. Whether a specialty material, configuration or pre-print is needed, we can meet your needs.

- Experts available to assist in material selection. To simplify the selection process, please provide the following information:
  - Printer model
  - Resistance—chemical, scratch, etc.
  - Environment—indoors or outdoors, temperature, etc.
  - Surface—metal, plastic, rough, curved, etc.
  - Size—length, width, perforations, slits, etc.
- Expedite service offered to reduce lead time
- Free dies on all custom media orders
- Over 8,000 dies available

### Inventory Management Programs

We offer an array of inventory management programs for custom supplies.

- Blanket Orders
  - » Price protection
  - » Pre-scheduled shipments
  - » Low minimum requirements
- 3, 4, 5 and 6 month Make and Hold options
  - » Cost based on larger run quantity
  - » Flexible shipment dates and quantities
- Inventory Management Service
  - » Custom product stocked for you
  - » Immediate shipments

### Sample Program

We offer many options to obtain sample materials.

- Sample Packs
  - » Contain an array of materials
  - » ZipShip, synthetic, wristbands, receipt paper
- Strip of Material
  - » Evaluation of adhesive, thickness and durability
- Sample Roll
  - » Available in select sizes for most materials
  - » Evaluation of adhesive, thickness and durability
  - » Ability to print many labels
- ZipShip Roll
  - » Available in several sizes for our most popular materials
  - » Full evaluation to test in application
- Pilot Run
  - » Exact size and configuration
  - » Full evaluation to test in application

## MANUFACTURING CAPABILITIES

A world-class convertor of labels, tags, receipt paper and wristbands, Zebra specializes in narrow-web flexographic printing on thermal materials. By making and testing our own printer supplies, we can assure you receive the highest-quality products performance-matched to your Zebra printer and application. Our multiple manufacturing locations provide convenient shipping throughout North America.

### Printing

- Up to eight-color printing with special water-based inks for thermal materials
- Up to three UV colors or coatings
- Front- and back-side printing
- Computerized vision-inspection systems
- UL mark

### Converting

- Roll-to-roll and fanfolding
- Press widths from 7 inches to 20 inches
- Laminating
- Die cutting up to five stations
- Perforations, face slits, and back slits
- Adhesive deadening and spot coating
- UL/cUL and CSA recognized

### Finishing

- 3/4-inch to 6-inch cores
- Shrink-wrapping
- Custom kits



## R&D CAPABILITIES

With more than 25 years of experience working with thermal print technology, Zebra's Supplies R&D team has unparalleled knowledge of supplies for Zebra printers. With access to all Zebra printers and thousands of different materials, we can find the right material for your application.

### We Can Test

- Image abrasion/durability
- Accelerated outdoor life
- Adhesion strength on various materials
- Temperatures from -112° F/-80° C to 1,000° F/538° C
- Material tear strength
- Harsh chemicals
- Printhead life

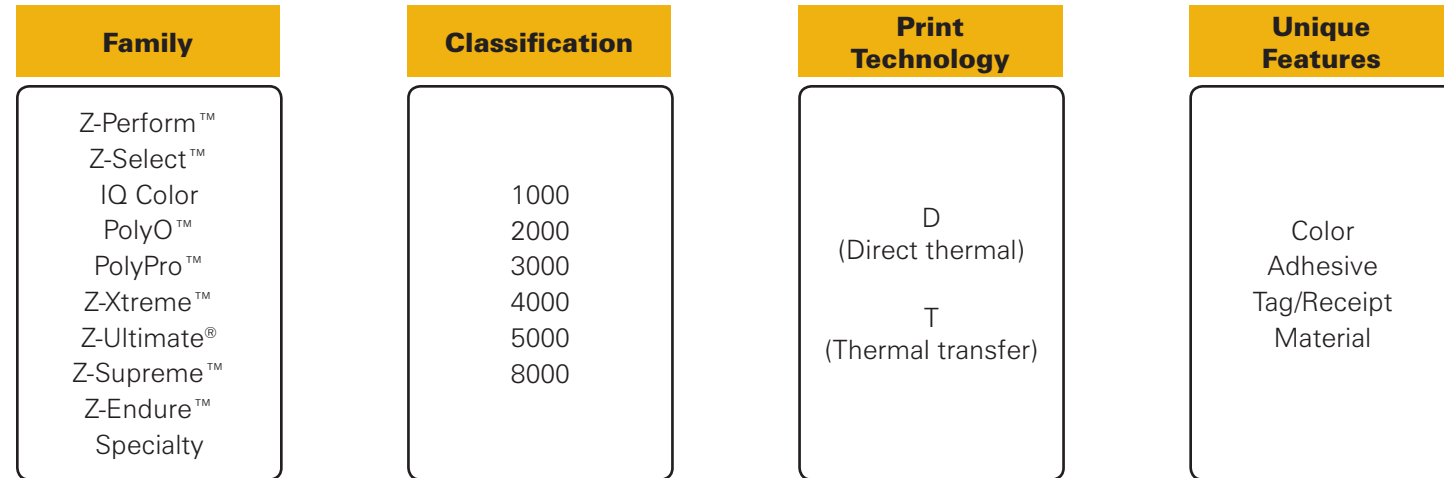
### Services Offered

- Application assistance and testing
- New material development
- Exact-match samples
- UL/cUL and CSA approvals
- UID approvals
- IMDS approvals



# MATERIAL NAMING CONVENTION

Example: 8000T Piggyback



| Family   |   |   |
|--|---|---|
| Zebra offers a variety of paper and synthetic media, which will meet the requirements of most applications. Paper offers an inexpensive way to print in a variety of general-purpose applications, while synthetic offers more durable, long-lasting results with resistance to abrasion, moisture, and chemicals. | <b>Paper</b> <ul style="list-style-type: none"> <li>Z-Perform</li> <li>Z-Select</li> <li>IQ Color</li> <li>Specialty</li> </ul>   | <b>Synthetic</b> <ul style="list-style-type: none"> <li>PolyO</li> <li>PolyPro</li> <li>Z-Xtreme</li> <li>Z-Ultimate</li> <li>Z-Supreme</li> <li>Z-Endure™</li> </ul>                                 |
| Classifications  |   |   |
| Zebra media products are classified by their level of performance and cost. Specialty products are classified separately.  | <b>1000-5000</b><br>The higher the number, the higher the performance   | <b>8000</b><br>Specialty products with some unique features designed for specialized applications   |
| Print Technology   |   |   |
| Thermal transfer technology uses a ribbon to transfer an image onto the label material. Direct thermal technology does not require a ribbon. Instead, a chemically coated heat-sensitive material produces images as heat is applied to the surface.   | <b>Direct Thermal</b> <ul style="list-style-type: none"> <li>Primarily indoor use</li> <li>Short to medium-term lifespan</li> <li>Minimal chemical resistance</li> <li>No ribbon</li> </ul> | <b>Thermal Transfer</b> <ul style="list-style-type: none"> <li>Indoor or outdoor usage</li> <li>Medium to long-term lifespan</li> <li>Excellent chemical resistance</li> <li>Ribbon needed</li> </ul> |
| Unique Feature   |   |   |
| The unique feature is a material attribute that differentiates the product. For example, the product can be described by the color, adhesive, material, or whether it is a tag or receipt.   |   |   |

# COMPARISON OF THERMAL TRANSFER RIBBONS

| Ribbon                | Formulation | Material compatibility            | Darkness setting |      | Print speed |      | Scratch/smear resistance |      | Chemical resistance |      |
|-----------------------|-------------|-----------------------------------|------------------|------|-------------|------|--------------------------|------|---------------------|------|
|                       |             |                                   | Low              | High | Low         | High | Low                      | High | Low                 | High |
| 2000 Standard         | Wax         | Coated Paper                      | █                |      | █           |      | █                        |      | █                   |      |
| 2100 High-Performance | Wax         | Coated Paper                      | █                |      | █           |      | █                        |      | █                   |      |
| 6000 High-Performance | Wax         | Coated Paper                      | █                |      | █           |      | █                        |      | █                   |      |
| 5319 Performance      | Wax         | Uncoated Paper/<br>Coated Paper   | █                |      | █           |      | █                        |      | █                   |      |
| 5555 Standard         | Wax/Resin   | Coated Paper/<br>Matte Synthetics | █                |      | █           |      | █                        |      | █                   |      |
| 3200 High-Performance | Wax/Resin   | Coated Paper/<br>Matte Synthetics | █                |      | █           |      | █                        |      | █                   |      |
| 6100 High-Performance | Wax/Resin   | Coated Paper/<br>Matte Synthetics | █                |      | █           |      | █                        |      | █                   |      |
| 5586 Premium          | Wax/Resin   | Coated Paper/<br>Matte Synthetics | █                |      | █           |      | █                        |      | █                   |      |
| 5095 High-Performance | Resin       | Gloss Paper/<br>Gloss Synthetics  | █                |      | █           |      | █                        |      | █                   |      |
| 6200 High-Performance | Resin       | Gloss Paper/<br>Gloss Synthetics  | █                |      | █           |      | █                        |      | █                   |      |
| 5100 Premium          | Resin       | Gloss Synthetics                  | █                |      | █           |      | █                        |      | █                   |      |
| Image Lock            | Resin       | Gloss/Matte Synthetics            | █                |      | █           |      | █                        |      | █                   |      |

## ADHESIVES

| Adhesive          | Description  |
|-------------------|--|
| Acrylic           | General-purpose; provides long-term adhesion; resistance to chemicals and UV exposure; works across a wide temperature range   |
| Rubber            | General-purpose; provides good initial tack; offers adhesion to rough surfaces; not recommended for auto apply   |
| High-Performance  | Offers higher resistance to chemicals and UV exposure; often has agency approval such as indirect food contact (FDA 175.105), UL/cUL and CSA approval                  |
| High-Temp         | Maintains strong adhesion at high temperatures (over 300° F /149° C)   |
| Cold-Temp         | Maintains strong adhesion at low temperatures (down to -112° F /-80° C)  |
| All-Temp          | May be applied to temperatures below freezing (32° F /0° C)  |
| Removable         | Clean removal from most surfaces without damaging the label or the surface   |
| Ultra-Removable   | Clean removal from nearly all surfaces, including metal and glass, without damaging the label or the surface   |
| Multi-Removable   | Offers dual functionality; provides permanent long-term adhesion but also allows for clean removal; repositionable to allow for removal, adjustment, and reapplication |
| High-Tack Acrylic | Works well on hard-to-label surfaces and provides good resistance to chemicals and UV exposure   |
| High-Tack Rubber  | Works very well on hard-to-label surfaces; provides good initial tack  |

\*All adhesives above are permanent unless stated otherwise.



# UL/cUL-RECOGNIZED AND CSA-ACCEPTED LABELING SYSTEM

Zebra offers one of the largest selections of UL/cUL-certified label and ribbon combinations. In addition, all of our locations are authorized to pre-print the UL mark.

| Product                         | Material  | Ribbon                       | Recognition                               |
|---------------------------------|-----------|------------------------------|---|
| Z-Supreme 2000T White           | Polyimide | 5095, 5100                   | UL/cUL indoor                             |
| Z-Supreme 4000T White           | Polyimide | 5095, 5100                   | UL/cUL indoor                             |
| Z-Ultimate 4000T White          | Polyester | 5095, 5100                   | UL/cUL indoor/outdoor; CSA indoor/outdoor |
| Z-Ultimate 4000T Silver         | Polyester | 5095, 5100                   | UL/cUL indoor/outdoor; CSA indoor/outdoor |
| Z-Ultimate 4000T Removable      | Polyester | 5095, 5100                   | UL/cUL indoor                             |
| Z-Ultimate 4000T High-Tack      | Polyester | 5095, 5100                   | UL/cUL indoor/outdoor; CSA indoor/outdoor |
| Z-Ultimate 3000T White          | Polyester | 5095, 5100                   | UL/cUL indoor/outdoor; CSA indoor/outdoor |
| Z-Ultimate 3000T Silver         | Polyester | 5095, 5100                   | UL/cUL indoor/outdoor; CSA indoor/outdoor |
| Z-Ultimate 2000T White          | Polyester | 5095, 5100                   | UL indoor                                 |
| Z-Xtreme 4000T White            | Polyester | 5319, 3200, 5586, 5095, 5100 | UL/cUL indoor/outdoor; CSA indoor/outdoor |
| Z-Xtreme 4000T Silver           | Polyester | 5319, 3200, 5586, 5095, 5100 | UL/cUL indoor/outdoor; CSA indoor/outdoor |
| Z-Xtreme 4000T High-Tack White  | Polyester | 5319, 3200, 5586, 5095, 5100 | UL/cUL indoor/outdoor; CSA indoor/outdoor |
| Z-Xtreme 4000T High-Tack Silver | Polyester | 5319, 3200, 5586, 5095, 5100 | UL/cUL indoor/outdoor; CSA indoor/outdoor |
| Z-Xtreme 2000T White            | Polyester | 3200, 5586, 5095             | UL/cUL indoor                             |
| Z-Xtreme 2000T Silver           | Polyester | 3200, 5586, 5095             | UL/cUL indoor                             |
| Z-Xtreme 2000T Clear            | Polyester | 3200, 5586, 5095             | UL/cUL indoor                             |
| 8000T Void Matte                | Polyester | 5586, 5095                   | UL/cUL indoor/outdoor                     |

Many Zebra printing systems are recognized by Underwriters Laboratory (UL/cUL) and accepted by the Canadian Standards Association (CSA) for printing indoor- and outdoor-use labels. These media/ribbon combinations include the above. If your application requires a UL/cUL-recognized or CSA-accepted labeling system, please consult with your Zebra account executive to determine which printer models can be used with these UL/cUL and CSA label/ribbon combinations.

## ENVIRONMENTAL SUSTAINABILITY

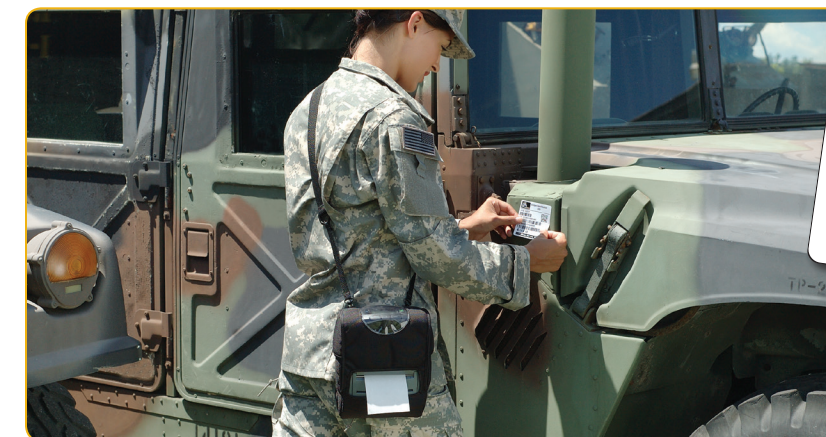
Reducing our impact on the environment is important to us all. Many organizations have developed environmental sustainability plans that include purchasing more environmentally friendly products. In support of these initiatives, Zebra has added eco-friendly thermal transfer labels to its line of materials. To find these materials, look for:



In addition to offering environmentally-friendly products, our manufacturing plants recycle much of their waste. This includes the recycling of waste matrix (a by-product of the converting process) plastic banding, stretch film, corrugate, fiber and plastic cores, plastic card material, office paper and light bulbs.

## UID SOLUTION SUPPLIES SELECTOR GUIDE

| Media & ribbon combination         | Z-Ultimate 4000T White with 5100 Ribbon         | Z-Ultimate 4000T Silver with 5100 Ribbon        | Z-Xtreme 5000T with Image Lock™ Ribbon          | 8000T Ultra High-Tack Matte with 5095 Ribbon                    | PolyPro 4000T with 5095 Ribbon                  | 8000T Image Lock with Image Lock Ribbon                          | Z-Endure™ 4000T with 5100 Ribbon                | 8000T Piggyback Clear Matte with 5586 Ribbon    |
|------------------------------------|---|---|---|---|---|--|---|---|
| <b>Ribbon type</b>                 | Resin   | Resin   | Resin   | Resin   | Resin   | Resin  | Resin   | Wax-Resin                                       |
| <b>Material description</b>        | Gloss Polyester                                 | Gloss Polyester                                 | Matte Polyester                                 | Matte Polyester   | Matte Polypropylene                             | Polyolefin   | Semi-Gloss Acrylic                              | Gloss/Matte Polyester Combination               |
| <b>Adhesive types</b>              | Permanent Acrylic                               | Permanent Acrylic                               | High-Tack Permanent Acrylic                     | High-Tack Permanent Acrylic                                     | Permanent Acrylic                               | Permanent Acrylic  | Permanent Acrylic                               | Permanent Acrylic                               |
| <b>Minimum application temp.</b>   | 50° F/10° C                                     | 50° F/10° C                                     | 50° F/10° C                                     | 40° F/4° C  | 10° F/-12° C                                    | 50° F/10° C  | 50° F/10° C                                     | 50° F/10° C                                     |
| <b>Service temp.</b>               | -40° F to 302° F<br>-40° C to 150° C            | -40° F to 302° F<br>-40° C to 150° C            | -40° F to 302° F<br>-40° C to 150° C            | -20° F to 302° F<br>-29° C to 150° C                            | -40° F to 250° F<br>-40° C to 121° C            | -112° F to 248° F<br>-80° C to 120° C                            | -40° F to 302° F<br>-40° C to 150° C            | -40° F to 302° F<br>-40° C to 150° C            |
| <b>Surface to be labeled</b>       | Corrugate, Paper, Packaging Films, Metal, Glass | Corrugate, Paper, Packaging Films, Metal, Glass | Corrugate, Paper, Packaging Films, Metal, Glass | Corrugate, Paper, Packaging Films, Metal, Glass, Rough Surfaces | Corrugate, Paper, Packaging Films, Metal, Glass | Corrugate, Paper, Packaging Films, Metal, Glass, Curved Surfaces | Corrugate, Paper, Packaging Films, Metal, Glass | Corrugate, Paper, Packaging Films, Metal, Glass |
| <b>Environment</b>                 | Indoor<br>Outdoor up to 3 years                 | Indoor<br>Outdoor up to 3 years                 | Indoor<br>Outdoor up to 3 years                 | Indoor<br>Outdoor up to 3 years                                 | Indoor<br>Outdoor up to 2 years                 | Indoor<br>Outdoor up to 5 years                                  | Indoor<br>Outdoor up to 10 years                | Indoor<br>Outdoor up to 3 years                 |
| <b>Resistance</b>                  | Moisture, Abrasion, Weak-to-Moderate Chemicals  | Moisture, Abrasion, Weak-to-Moderate Chemicals  | Moisture, Abrasion, Weak-to-Moderate Chemicals  | Moisture, Weak-to-Moderate Chemicals                            | Moisture, Weak-to-Harsh Chemicals               | Moisture, Abrasion, Weak-to-Harsh Chemicals                      | Moisture, Abrasion, Weak-to-Moderate Chemicals  | Moisture, Abrasion, Weak-to-Harsh Chemicals     |
| <b>Compliant to MIL PRF 61002A</b> | Type II, Grade A B & C, Style 1, Composition b  | Type II, Grade A B & C, Style 1, Composition b  | Type II, Grade A B & C, Style 1, Composition b  | Type II, Grade A B & C, Style 1, Composition b                  | Type II, Grade A B & C, Style 1, Composition b  | Type II, Grade A B & C, Style 1, Composition b                   | Type II, Grade A B & C, Style 1, Composition b  | Type II, Grade A B & C, Style 1, Composition b  |



**Labels**

**Performance Characteristics:** ● Recommended ● Test In Your Application **NR** Not Recommended

| Product Name   | Thermal Transfer (TT)<br>Direct Thermal (DT) | Product Description   | Applications  | Minimum Application Temperature |
|--|--|---|---|---------------------------------|
| <b>Z-Perform™</b> Bright white, smooth paper facestock that provides the optimal balance between performance and price for industrial applications. Recommended for indoor use.  |  |   |   |                                 |
| 1000D  | DT   | Uncoated paper label with a permanent acrylic adhesive; limited resistance to moisture or abrasion; not recommended for high print speed applications   | Indoor, general-purpose labeling; warehouse, distribution, bakery application, and address labeling   | 25° F<br>-4° C                  |
| 2000T  | TT   | Paper label with a permanent acrylic adhesive; meets FDA 175.105 indirect food contact requirements   | Labeling of packaging material including corrugate, plastic, and metal; work in process   | 25° F<br>-4° C                  |
| 2000D  | DT   | Paper label with an all-temp acrylic adhesive   | Packaging and compliance labeling; indoor labeling applications   | -40° F<br>-40° C                |
| <b>Z-Select™</b> Premium, bright white, ultra-smooth paper facestock specially coated to provide optimal quality. Ideal for high-speed printing applications where print quality is important. Recommended for indoor use. |  |   |   |                                 |
| 4000T  | TT   | Paper label with permanent acrylic adhesive that may be used across a wide temperature range; meets FDA 175.105 indirect food contact requirements  | Labeling of packaging material including corrugate, plastic, and metal; product identification, compliance labeling, work in process  | 25° F<br>-4° C                  |
| 4000T All-Temp   | TT   | Paper label with a permanent all-temp acrylic adhesive that allows the label to be applied to surfaces as cold as -20° F / -29° C   | Labeling of packaging material including corrugate, plastic, and metal; ideal for identifying products in cold storage or refrigerated warehouses   | -20° F<br>-29° C                |
| 4000T Removable  | TT   | Paper label with a removable acrylic adhesive for applications requiring clean removability without damaging the label or the surface; meets FDA 175.105 indirect food contact requirements     | Product identification; labeling of shelves, bins, or totes intended for reuse when labels are removed  | 40° F<br>4° C                   |
| 4000D  | DT   | Paper label with a permanent all-temp acrylic adhesive that allows the label to be applied to surfaces as cold as -20° F / -29° C; meets FDA 175.105 indirect food contact requirements         | Labeling of most packaging materials; document tracking; cold-temp applications; IV bag labeling  | -20° F<br>-29° C                |
| 4000D Removable  | DT   | Paper label with a removable acrylic adhesive for applications requiring clean removability without damaging the label or the surface; meets FDA 175.105 indirect food contact requirements     | General-purpose product and food labeling; removable shelf labeling   | 40° F<br>4° C                   |
| <b>IQ Color</b> Bright white, smooth paper facestock that has the ability to print vibrant color on demand in pre-defined zones to be used as a visual cue.  |  |   |   |                                 |
| 2000D <b>ZEBRA EXCLUSIVE</b>   | DT   | Paper label with a permanent acrylic adhesive. Limited resistance to moisture or abrasion.  | Healthcare for prioritization of lab and pharmacy orders. Transportation and logistics for sortation and inventory management. Manufacturing for quality control and work in process. Retail for shelf and product labeling | 25° F<br>-4° C                  |
| 2000D All-Temp <b>ZEBRA EXCLUSIVE</b>  | DT   | Paper label with a permanent all-temp acrylic adhesive. Limited resistance to moisture or abrasion.   | Cold temp. applications such as frozen food labeling. Retail for shelf and product labeling. Healthcare for prioritization of lab and pharmacy orders.  | -20° F<br>-29° C                |
| 2000D Removable <b>ZEBRA EXCLUSIVE</b>   | DT   | Paper label with a removable acrylic adhesive. Limited resistance to moisture or abrasion.  | Transportation and logistics for sortation and inventory management. Manufacturing for quality control and work in process. Retail for shelf and product labeling   | 40° F<br>4° C                   |
| 2000D Opaque <b>ZEBRA EXCLUSIVE</b>  | DT   | Opaque paper label with a high performance, acrylic-based adhesive. Limited resistance to moisture or abrasion.   | Applications requiring a "cover-up" label. Transportation and logistics for sortation and inventory management. Manufacturing for quality control and work in process. Retail for shelf and product labeling.               | 40° F<br>4° C                   |
| <b>Specialty</b> White paper labels and tags designed for unique or challenging applications. Recommended for indoor use.  |  |   |   |                                 |
| 8000T High-Tack  | TT   | Paper label with a permanent rubber adhesive that provides high initial tack; meets FDA 175.105 indirect food contact requirements  | Labeling of corrugate and recycled corrugate; shipping labels   | 40° F<br>4° C                   |
| 8000T Super-Tack   | TT   | Paper label with a Hammerlock® permanent rubber adhesive that provides best initial and long-term adhesion  | Difficult surfaces such as wood and textured substrates   | 30° F<br>-1° C                  |
| 8000T Multi-Removable  | TT   | Paper label with a multi-removable adhesive that offers dual functionality; provides permanent adhesion to corrugate surfaces but also allows clean removal from glass surfaces; repositionable | Labeling cartons, totes, and bins; promotional and shelf labels; allows frequent application and removal of label   | 25° F<br>-4° C                  |
| 8000T Ultra-Removable  | TT   | Paper label with an ultra-removable acrylic adhesive that provides long-term clean removability   | Removable shelf or scan pallet labels; removable document labels  | 20° F<br>-7° C                  |
| 8000T Opaque   | TT   | Opaque paper label with a permanent acrylic adhesive; meets FDA 175.105 indirect food contact requirements  | Applications requiring a "cover-up" label; product ID; chemical containers  | 20° F<br>-29° C                 |
| 8000T Piggyback  | TT   | Piggyback paper label with a permanent acrylic adhesive that allows for removing the label, leaving the liner, and re-applying the second liner to a final application                          | Labeling of packaging materials; order picking; work in process   | 25° F<br>-4° C                  |
| 8000T Semi-Gloss   | TT   | Semi-gloss paper label with a permanent rubber adhesive; meets FDA 175.105 indirect food contact requirements   | Product identification; diskette labeling; high-volume applications   | 25° F<br>-4° C                  |

| Service Temperature                 | Surfaces to be Labeled |       |                 |               |                 |                |                 |                | Environment |          | Resistance |          |                                    |   | Suggested Ribbons                  |  |  |   |
|-------------------------------------|------------------------|-------|-----------------|---------------|-----------------|----------------|-----------------|----------------|-------------|----------|------------|----------|------------------------------------|---|------------------------------------|--|--|---|
|                                     | Corrugate              | Paper | Packaging Films | Most Plastics | Metal and Glass | Rough Surfaces | Curved Surfaces | Moist Surfaces | Indoors     | Outdoors | Moisture   | Abrasion | Chemical-Weak (ie. Window Cleaner) | Chemical-Moderate (ie. Alcohol, Bleach) | Chemical-Harsh (ie. Gasoline, Oil) | Chemical-Extreme (ie. Acetone, Xylene) | Standard Application-Weak and Moderate Chemicals | High Durability-Abrasion, Harsh and Extreme Chemicals |
| -40° F to 140° F<br>-40° C to 60° C | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●           | NR       | NR         | ●        | NR                                 | NR                                      | NR                                 | NR                                     | N/A  | N/A   |
| -65° F to 200° F<br>-54° C to 93° C | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●           | NR       | ●          | ●        | ●                                  | NR                                      | NR                                 | NR                                     | 2000, 5319                                       | 5555, 3200  |
| -65° F to 131° F<br>-54° C to 55° C | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●           | NR       | ●          | ●        | ●                                  | NR                                      | NR                                 | NR                                     | N/A  | N/A   |
| -65° F to 200° F<br>-54° C to 93° C | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●           | NR       | ●          | ●        | ●                                  | NR                                      | NR                                 | NR                                     | 2000, 2100, 5319                                 | 5555, 3200  |
| -65° F to 200° F<br>-54° C to 93° C | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●           | NR       | ●          | ●        | ●                                  | NR                                      | NR                                 | NR                                     | 2000, 2100, 5319                                 | 5555, 3200  |
| -65° F to 180° F<br>-54° C to 82° C | ●                      | ●     | ●               | ●             | ●               | NR             | NR              | NR             | ●           | NR       | ●          | ●        | ●                                  | NR                                      | NR                                 | NR                                     | 2000, 2100, 5319                                 | 5555, 3200  |
| -65° F to 140° F<br>-54° C to 60° C | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●           | NR       | ●          | ●        | ●                                  | NR                                      | NR                                 | NR                                     | N/A  | N/A   |
| -65° F to 140° F<br>-54° C to 60° C | ●                      | ●     | ●               | ●             | ●               | NR             | NR              | NR             | ●           | NR       | ●          | ●        | ●                                  | NR                                      | NR                                 | NR                                     | N/A  | N/A   |
| -65° F to 120° F<br>-54° C to 40° C | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●           | NR       | NR         | ●        | NR                                 | NR                                      | NR                                 | NR                                     | N/A  | N/A   |
| -65° F to 120° F<br>-54° C to 49° C | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●           | NR       | NR         | ●        | NR                                 | NR                                      | NR                                 | NR                                     | N/A  | N/A   |
| -65° F to 120° F<br>-54° C to 40° C | ●                      | ●     | ●               | ●             | ●               | NR             | NR              | NR             | ●           | NR       | NR         | ●        | NR                                 | NR                                      | NR                                 | NR                                     | N/A  | N/A   |
| -65° F to 120° F<br>-54° C to 49° C | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●           | NR       | NR         | ●        | NR                                 | NR                                      | NR                                 | NR                                     | N/A  | N/A   |
| -65° F to 160° F<br>-54° C to 71° C | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●           | NR       | ●          | ●        | ●                                  | NR                                      | NR                                 | NR                                     | 2000, 5319                                       | 5555, 3200  |
| -65° F to 150° F<br>-54° C to 66° C | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●           | NR       | ●          | ●        | ●                                  | NR                                      | NR                                 | NR                                     | 2000, 5319                                       | 5555, 3200  |
| -20° F to 200° F<br>-29° C to 93° C | ●                      | ●     | ●               | ●             | ●               | NR             | ●               | ●              | ●           | NR       | ●          | ●        | ●                                  | NR                                      | NR                                 | NR                                     | 2000, 5319                                       | N/A   |
| -40° F to 160° F<br>-40° C to 71° C | ●                      | ●     | ●               | ●             | ●               | NR             | NR              | NR             | ●           | NR       | ●          | ●        | ●                                  | NR                                      | NR                                 | NR                                     | 2000, 5319                                       | 5555, 3200  |
| -65° F to 200° F<br>-54° C to 93° C | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●           | NR       | ●          | ●        | ●                                  | NR                                      | NR                                 | NR                                     | 2000, 5319, 2100                                 | 5555, 3200  |
| -65° F to 200° F<br>-54° C to 93° C | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●           | NR       | ●          | ●        | ●                                  | NR                                      | NR                                 | NR                                     | 2000, 5319                                       | 5555, 3200  |
| -65° F to 160° F<br>-54° C to 71° C | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●           | NR       | ●          | ●        | ●                                  | NR                                      | NR                                 | NR                                     | 2000, 5319                                       | 3200  |

**Labels**

**Performance Characteristics:** ● Recommended ● Test In Your Application ● NR Not Recommended

| Product Name   | Thermal Transfer (TT)<br>Direct Thermal (DT) | Product Description   | Applications   | Minimum Application Temperature |
|--|--|---|--|---------------------------------|
| <b>Specialty (continued)</b> White paper labels and tags designed for unique or challenging applications. Recommended for indoor use.  |  |   |  |                                 |
| 8000T High-Gloss   | TT   | High-gloss paper label with permanent acrylic adhesive  | High-gloss retail and consumer goods package labels; color preprinted labels   | 25° F<br>-4° C                  |
| 8000T Lab  | TT   | Paper label with a permanent acrylic adhesive specifically designed to adhere to small, curved surfaces   | In hospitals, laboratories and pharmacies on curved surfaces, such as vials, test tubes and syringes   | 25° F<br>-4° C                  |
| 8000D Lab  | DT   | Paper label with a permanent acrylic adhesive specifically designed to adhere to small, curved surfaces   | In hospitals, laboratories and pharmacies on curved surfaces, such as vials, test tubes and syringes   | 25° F<br>-4° C                  |
| 8000D Near IR  | DT   | Paper label with a permanent acrylic adhesive; scannable in both visible and near infrared wavelength; meets FDA 175.105 indirect food contact requirements   | Shipping applications; indoor, general-purpose labeling; meets requirements of package delivery industry   | 25° F<br>-4° C                  |
| 8000D IR   | DT   | Paper label with an all-temp permanent acrylic adhesive; scannable in visible, near infrared, and infrared ranges; meets FDA 175.105 indirect food contact requirements   | Indoor, general-purpose labeling; labeling of most packaging material; excellent for cold-temperature applications   | -20° F<br>-29° C                |
| 8000D High-Temp  | DT   | Paper label with high-performance permanent acrylic adhesive that provides temperature resistance up to 194° F/90° C; offers superior durability under fluorescent bulbs and partial UV exposure (through window) | Hot food labeling such as pizza; coffee; direct store delivery; archival use and short-term outdoor use  | -40° F<br>-40° C                |
| 8000D Linerless  | DT   | Linerless paper label with permanent acrylic adhesive; eliminates liner waste   | Indoor, general-purpose labeling; labeling of most packaging material; excellent for cold-temp applications  | 40° F<br>4° C                   |
| 8000D Linerless Removable  | DT   | Linerless paper label with removable acrylic adhesive; eliminates liner waste   | Indoor removable general-purpose labeling; labeling of most packaging material; excellent for cold-temp applications   | 40° F<br>4° C                   |
| <b>Poly0™</b> White, corona-treated polyolefin facestock that provides flexibility for labeling curved or rough surfaces; minimal resistance to scratching and smearing. Recommended for applications that require up to 6 months outdoors; temperature exposure up to 200° F/93° C.   |  |   |  |                                 |
| 3000T  | TT   | Highly flexible corona-treated polyolefin label with an all-temp permanent acrylic adhesive that provides high initial tack designed exclusively for industrial labeling applications                             | Chemical drum labeling; product labeling; retail applications; recyclable shrink wrap applications; labeling harness configurations                                  | 25° F<br>-4° C                  |
| 4000T  | TT   | Semi-rigid corona-treated polyolefin label with an all-temp permanent acrylic adhesive that provides high initial tack and cold-temperature properties; meets FDA 175.105 indirect food contact requirements      | Chemical drum labels; medical and pharmaceutical labeling; cold-temperature storage  | 10° F<br>-12° C                 |
| <b>PolyPro™</b> White, matte polypropylene facestock that provides high print quality and resistance to scratching and smearing; offers some flexibility for labeling curved surfaces. Thermal transfer materials recommended for applications that require up to 1-2 years outdoors; temperature exposure up to 250° F /121° C. |  |   |  |                                 |
| 3000T  | TT   | Polypropylene label with a permanent acrylic adhesive; meets FDA 175.105 indirect food contact requirements   | Chemical drum, test tube, or indirect food labeling; capital asset labeling; labeling small curved or irregularly shaped products; labeling packages in cold storage | 45° F<br>7° C                   |
| 3000T High-Tack  | TT   | Polypropylene label with a high-tack permanent acrylic adhesive   | Chemical drum, medical device, or indirect food labeling; capital asset labeling; labeling small curved or irregularly shaped products; hard-to-label surfaces       | 32° F<br>0° C                   |
| 4000T  | TT   | Kimdura® polypropylene label with a permanent acrylic adhesive; CSA acceptances; meets FDA 175.105 indirect food contact requirements   | Chemical drum, medical device, or indirect food labeling; capital asset labeling; labeling small curved or irregularly shaped products; UID compliance               | 10° F<br>-12° C                 |
| 4000T High-Tack  | TT   | Kimdura polypropylene label with a high-tack acrylic permanent adhesive; meets FDA 175.105 indirect food contact requirements   | Chemical drum, medical device, or indirect food labeling; capital asset labeling; labeling small curved or irregularly shaped products; hard-to-label surfaces       | 35° F<br>2° C                   |
| 4000T Removable  | TT   | Kimdura polypropylene label with a removable acrylic adhesive; provides good resistance to common industrial cleaning solutions   | Removable shelf, bin, furniture, or product labeling   | 45° F<br>7° C                   |
| 4000D  | DT   | Polypropylene label with an all-temp permanent acrylic adhesive that allows label to be applied to surfaces as cold as -40° F/40° C, meets FDA 175.105 indirect food contact requirements                         | Indoor, general-purpose labeling; houseware goods labeling; cold storage; provides good resistance to common industrial cleaning solutions                           | -40° F<br>-40° C                |
| 4000D Removable  | DT   | Polypropylene label with a removable acrylic adhesive; meets FDA 175.105 indirect food contact requirements   | Indoor, removable, general-purpose labeling; labeling Tupperware® containers; shelf labeling   | 10° F<br>-12° C                 |
| <b>Z-Xtreme™</b> White, matte polyester facestock that provides outstanding print quality and good smear and scratch resistance. Offers excellent resistance to chemicals. Recommended for applications that require up to 3 years outdoors; temperature exposure up to 300° F/149° C.   |  |   |  |                                 |
| 2000T  | TT   | Matte polyester label with a permanent acrylic adhesive; UL/cUL acceptances; provides moderate chemical resistance; also available in silver and clear  | UL/cUL compliance product labeling; asset labeling; serial plate labeling  | 50° F<br>10° C                  |

| Service Temperature                  | Surfaces to be Labeled |       |                 |               |                 |                |                 | Environment    |         | Resistance |          |          |                                    | Suggested Ribbons                       |                                    |  |  |   |
|--------------------------------------|------------------------|-------|-----------------|---------------|-----------------|----------------|-----------------|----------------|---------|------------|----------|----------|------------------------------------|---|------------------------------------|--|--|---|
|                                      | Corrugate              | Paper | Packaging Films | Most Plastics | Metal and Glass | Rough Surfaces | Curved Surfaces | Moist Surfaces | Indoors | Outdoors   | Moisture | Abrasion | Chemical—Weak (ie. Window Cleaner) | Chemical—Moderate (ie. Alcohol, Bleach) | Chemical—Harsh (ie. Gasoline, Oil) | Chemical—Extreme (ie. Acetone, Xylene) | Standard Application—Weak and Moderate Chemicals | High Durability—Abrasion, Harsh and Extreme Chemicals |
| -65° F to 200° F<br>-54° C to 93° C  | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | NR      | ●          | ●        | ●        | ●                                  | NR                                      | NR                                 | 5586, 3200                             | 5095   |   |
| -75° F to 200° F<br>-59° C to 93° C  | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | NR      | ●          | ●        | ●        | NR                                 | NR                                      | NR                                 | 2100, 5319, 5555                       | 3200, 5586                                       |   |
| -75° F to 120° F<br>-59° C to 49° C  | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | NR      | ●          | ●        | ●        | NR                                 | NR                                      | NR                                 | N/A                                    | N/A  |   |
| -40° F to 140° F<br>-40° C to 60° C  | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | NR      | ●          | ●        | ●        | NR                                 | NR                                      | NR                                 | N/A                                    | N/A  |   |
| -65° F to 140° F<br>-54° C to 60° C  | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | NR      | ●          | ●        | ●        | NR                                 | NR                                      | NR                                 | N/A                                    | N/A  |   |
| -40° F to 194° F<br>-40° C to 90° C  | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | NR      | ●          | ●        | ●        | NR                                 | NR                                      | NR                                 | N/A                                    | N/A  |   |
| -40° F to 140° F<br>-40° C to 60° C  | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | NR      | ●          | ●        | ●        | NR                                 | NR                                      | NR                                 | N/A                                    | N/A  |   |
| -40° F to 140° F<br>-40° C to 60° C  | ●                      | ●     | ●               | ●             | ●               | NR             | NR              | NR             | ●       | NR         | ●        | ●        | NR                                 | NR                                      | NR                                 | N/A                                    | N/A  |   |
| <b>Poly0™</b>                        |                        |       |                 |               |                 |                |                 |                |         |            |          |          |                                    |   |                                    |  |  |   |
| -40° F to 200° F<br>-40° C to 93° C  | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●       | ●          | ●        | ●        | ●                                  | NR                                      | NR                                 | 3200, 5586                             | 5095   |   |
| -40° F to 176° F<br>-40° C to 80° C  | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●       | ●          | ●        | ●        | ●                                  | NR                                      | NR                                 | 5586                                   | 5095   |   |
| <b>PolyPro™</b>                      |                        |       |                 |               |                 |                |                 |                |         |            |          |          |                                    |   |                                    |  |  |   |
| -65° F to 200° F<br>-54° C to 93° C  | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●       | ●          | ●        | ●        | ●                                  | ●                                       | ●                                  | 3200, 5586                             | 5095   |   |
| -75° F to 200° F<br>-59° C to 93° C  | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●       | ●          | ●        | ●        | ●                                  | ●                                       | ●                                  | 3200, 5586                             | 5095   |   |
| -40° F to 250° F<br>-40° C to 121° C | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●       | ●          | ●        | ●        | ●                                  | ●                                       | ●                                  | 5555, 3200                             | 5586   |   |
| -65° F to 200° F<br>-54° C to 93° C  | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●       | ●          | ●        | ●        | ●                                  | ●                                       | ●                                  | 5555, 3200                             | 5586   |   |
| 0° F to 160° F<br>-18° C to 71° C    | ●                      | ●     | ●               | ●             | ●               | NR             | NR              | NR             | ●       | ●          | ●        | ●        | ●                                  | ●                                       | ●                                  | 5555, 3200                             | 5586   |   |
| -65° F to 131° F<br>-54° C to 55° C  | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | NR             | ●       | NR         | ●        | ●        | NR                                 | NR                                      | NR                                 | N/A                                    | N/A  |   |
| -20° F to 120° F<br>-29° C to 49° C  | ●                      | ●     | ●               | ●             | ●               | NR             | NR              | NR             | ●       | NR         | ●        | ●        | NR                                 | NR                                      | NR                                 | N/A                                    | N/A  |   |
| <b>Z-Xtreme™</b>                     |                        |       |                 |               |                 |                |                 |                |         |            |          |          |                                    |   |                                    |  |  |   |
| -40° F to 302° F<br>-40° C to 150° C | ●                      | ●     | ●               | ●             | ●               | ●              | NR              | ●              | ●       | ●          | ●        | ●        | ●                                  | NR                                      | NR                                 | 3200, 5586                             | 5095, 5100                                       |   |



**Labels**

**Performance Characteristics:** ● Recommended ● Test In Your Application ● NR Not Recommended

| Product Name   | Thermal Transfer (TT)<br>Direct Thermal (DT) | Product Description  | Applications  | Minimum Application Temperature |
|--|--|--|---|---------------------------------|
| <b>Z-Xtreme™ (continued)</b> White, matte polyester facestock that provides outstanding print quality and good smear and scratch resistance. Offers excellent resistance to chemicals. Recommended for applications that require up to 3 years outdoors; temperature exposure up to 300° F/149° C. |  |  |   |                                 |
| 2000T Removable  | TT   | Matte polyester label with a removable acrylic adhesive; provides moderate chemical resistance   | Removable shelf or bin labels; provides good resistance to common industrial cleaning solutions   | 50° F<br>10° C                  |
| 4000T  | TT   | Matte polyester label with a high-performance acrylic adhesive; UL/cUL and CSA acceptances; provides harsh-chemical resistance; also available in silver   | UL/cUL and CSA compliance product labeling; asset labeling; automotive labeling, particular around battery use; medical device labeling; serial plate labeling  | 50° F<br>10° C                  |
| 4000T High-Tack  | TT   | Matte polyester label with a high-tack permanent rubber adhesive; UL/cUL and CSA acceptances; provides harsh-chemical resistance; also available in silver   | UL/cUL and CSA compliance product labeling; medical device labeling; asset labeling; automotive labeling; serial plate labeling; hard-to-label surfaces   | 50° F<br>10° C                  |
| 5000T  | TT   | Matte polyester label with a permanent acrylic adhesive; UL/cUL acceptances; provides the most extreme chemical resistance   | UL/cUL compliance product labeling, asset labeling, automotive labeling, particularly around battery use; medical device labeling; serial plate labelings   | 50° F<br>10° C                  |
| <b>Z-Ultimate®</b> White, gloss polyester facestock that provides outstanding print quality and unparalleled smear and scratch resistance. Offers good resistance to chemicals. Recommended for applications that require up to 3 years outdoors; temperature exposure up to 300° F/150° C.        |  |  |   |                                 |
| 2000T <b>BEST VALUE</b>  | TT   | Polyester gloss label with a permanent acrylic adhesive; UL acceptance   | Product labeling; top-side PCB labeling; asset labeling; automotive labeling; serial plate labeling; fanfolding applications  | 50° F<br>10° C                  |
| 2000T Color Stay   | TT   | Gloss polyester label with clear gloss polyester overlaminate and a high-performance permanent acrylic adhesive; overlaminate protects color floodcoat against color fade in UV light for up to 2 years                                | Application requires color to be durable outdoors for up to 2 years. Vending machines; utility meters; outdoor/tools/equipment  | 50° F<br>10° C                  |
| 3000T  | TT   | Gloss polyester label with a high-performance permanent acrylic adhesive; UL/cUL and CSA acceptances; also available in silver   | UL/cUL and CSA compliance product labeling; top-side PCB labeling; asset labeling; automotive labeling; serial plate labeling   | 50° F<br>10° C                  |
| 4000T  | TT   | Gloss polyester label with a high-performance permanent acrylic adhesive; UL/cUL and CSA acceptances; also available in silver and clear   | UL/cUL and CSA compliance product labeling; top-side PCB labeling; asset labeling; automotive labeling; serial plate labeling; UID compliance   | 50° F<br>10° C                  |
| 4000T High-Tack  | TT   | Gloss polyester label with a high-tack permanent acrylic adhesive; UL/cUL and CSA acceptances; also available in silver  | UL/cUL and CSA compliance product labeling; asset labeling; automotive labeling; serial plate labeling; fanfolding applications; hard-to-label surfaces   | 50° F<br>10° C                  |
| 4000T Removable  |  | Gloss polyester label with a removable acrylic adhesive; UL/cUL acceptances  | UL/cUL compliance product labeling; removable shelf or scan-pallet labels; labels in contact with moving parts or friction; fanfolding applications   | 50° F<br>10° C                  |
| <b>Z-Supreme™</b> White, polyimide facestock designed for high-temperature environments up to 500° F/260° C. Recommended for printed circuit board (PCB) labeling.   |  |  |   |                                 |
| 2000T <b>BEST VALUE</b>  | TT   | White gloss polyimide label with a high-temp permanent acrylic adhesive that provides resistance to harsh environments; UL/cUL acceptances; available in 2 mil with paper or poly liner and 1 mil with paper or poly liner             | Printed circuit board top- and bottom-side applications; auto-apply applications (poly liner); harsh environments including lead-free manufacturing processes; high-temp industrial applications                                | 50° F<br>10° C                  |
| 3000T  | TT   | Matte polyimide label with a high-temp permanent acrylic adhesive that provides resistance to harsh environments; not recommended for processes using lead-free solder   | Printed circuit board top- and bottom-side applications; harsh environments; high-temp industrial applications  | 50° F<br>10° C                  |
| 4000T  | TT   | Gloss polyimide label with a high-temp permanent acrylic adhesive that provides resistance to harsh environments; also available in yellow and blue  | Printed circuit board top- and bottom-side applications including lead-free manufacturing processes; harsh environments; high-temp industrial applications  | 50° F<br>10° C                  |
| <b>Z-Endure™</b> Long-life acrylic facestock that provides excellent print quality and resistance to scratching and smearing. Recommended for applications requiring long-term outdoor use; temperature exposure up to 300° F.   |  |  |   |                                 |
| 3000T  | TT   | White acrylic film with a reflective glass bead coating and a high-performance permanent acrylic adhesive; excellent chemical and scratch resistance; provides outdoor durability of 7 years; also available in yellow, orange and red | Long-term outdoor safety warning labels; utility pole labeling; warning/instructional labels for heavy equipment; durable labels for ABS, aluminum and stainless steel surfaces that will be exposed outdoors for up to 7 years | 50° F<br>10° C                  |
| 4000T  | TT   | White acrylic label with a permanent acrylic adhesive that offers 10-year outdoor durability.  | Vending machines, utility meters, signs, posts; outdoor tools/equipment that require extended exposure up to 10 years; UID compliance   | 50° F<br>10° C                  |
| <b>Specialty</b> White, synthetic labels designed for unique or challenging applications.  |  |  |   |                                 |
| 8000T Image Lock   | TT   | Polyolefin label with a permanent acrylic adhesive; match with Image Lock ribbon to produce exceptional print quality; provides excellent chemical resistance; 5-year outdoor durability   | Chemical drums; laboratory labeling; automotive labeling; process control of electronic components; serial plate labeling; UID compliance   | 50° F<br>10° C                  |

Synthetic Labels

| Service Temperature                   | Surfaces to be Labeled |       |                 |               |                 |                |                 | Environment    |         |          |          | Resistance |                                    |   |                                    | Suggested Ribbons                      |  |   |
|---------------------------------------|------------------------|-------|-----------------|---------------|-----------------|----------------|-----------------|----------------|---------|----------|----------|------------|------------------------------------|---|------------------------------------|--|--|---|
|                                       | Corrugate              | Paper | Packaging Films | Most Plastics | Metal and Glass | Rough Surfaces | Curved Surfaces | Moist Surfaces | Indoors | Outdoors | Moisture | Abrasion   | Chemical—Weak (ie. Window Cleaner) | Chemical—Moderate (ie. Alcohol, Bleach) | Chemical—Harsh (ie. Gasoline, Oil) | Chemical—Extreme (ie. Acetone, Xylene) | Standard Application—Weak and Moderate Chemicals | High Durability—Abrasion, Harsh and Extreme Chemicals |
| -40° F to 302° F<br>-40° C to 150° C  | ●                      | ●     | ●               | ●             | ●               | NR             | NR              | ●              | ●       | ●        | ●        | ●          | ●                                  | ●                                       | NR                                 | NR                                     | 3200, 5586                                       | 5095, 5100  |
| -40° F to 300° F<br>-40° C to 149° C  | ●                      | ●     | ●               | ●             | ●               | ●              | NR              | ●              | ●       | ●        | ●        | ●          | ●                                  | ●                                       | ●                                  | ●                                      | 3200, 5586                                       | 5095  |
| -40° F to 300° F<br>-40° C to 149° C  | ●                      | ●     | ●               | ●             | ●               | ●              | NR              | ●              | ●       | ●        | ●        | ●          | ●                                  | ●                                       | ●                                  | NR                                     | 3200, 5586                                       | 5095  |
| -40° F to 300° F<br>-40° C to 149° C  | ●                      | ●     | ●               | ●             | ●               | ●              | NR              | ●              | ●       | ●        | ●        | ●          | ●                                  | ●                                       | ●                                  | ●                                      | Image Lock                                       | Image Lock  |
| -40° F to 302° F<br>-40° C to 150° C  | ●                      | ●     | ●               | ●             | ●               | NR             | NR              | NR             | ●       | ●        | ●        | ●          | ●                                  | ●                                       | ●                                  | NR                                     | 5095   | 5100  |
| -40° F to 302° F<br>-40° C to 150° C  | ●                      | ●     | ●               | ●             | ●               | NR             | NR              | NR             | ●       | ●        | ●        | ●          | ●                                  | ●                                       | ●                                  | NR                                     | 5095   | 5100  |
| -40° F to 302° F<br>-40° C to 150° C  | ●                      | ●     | ●               | ●             | ●               | ●              | NR              | ●              | ●       | ●        | ●        | ●          | ●                                  | ●                                       | ●                                  | NR                                     | 5095   | 5100  |
| -40° F to 302° F<br>-40° C to 150° C  | ●                      | ●     | ●               | ●             | ●               | ●              | NR              | ●              | ●       | ●        | ●        | ●          | ●                                  | ●                                       | ●                                  | NR                                     | 5095   | 5100  |
| -20° F to 302° F<br>-29° C to 150° C  | ●                      | ●     | ●               | ●             | ●               | NR             | NR              | NR             | ●       | ●        | ●        | ●          | ●                                  | ●                                       | ●                                  | NR                                     | 5095   | 5100  |
| -40° F to 500° F<br>-40° C to 260° C  | NR                     | NR    | NR              | ●             | ●               | ●              | ●               | ●              | ●       | ●        | ●        | ●          | ●                                  | ●                                       | ●                                  | NR                                     | 5095, 5100                                       | 5095, 5100  |
| -40° F to 482° F<br>-40° C to 250° C  | NR                     | NR    | NR              | ●             | ●               | ●              | ●               | ●              | ●       | ●        | ●        | ●          | ●                                  | ●                                       | ●                                  | NR                                     | N/A  | 5100  |
| -40° F to 500° F<br>-40° C to 260° C  | NR                     | NR    | NR              | ●             | ●               | ●              | ●               | ●              | ●       | ●        | ●        | ●          | ●                                  | ●                                       | ●                                  | NR                                     | N/A  | 5100  |
| -40° F to 176° F<br>-40° C to 80° C   | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●       | ●        | ●        | ●          | ●                                  | ●                                       | ●                                  | NR                                     | 5095   | 5100  |
| -40° F to 302° F<br>-40° C to 150° C  | ●                      | ●     | ●               | ●             | ●               | ●              | NR              | ●              | ●       | ●        | ●        | ●          | ●                                  | ●                                       | ●                                  | NR                                     | 5095   | 5100  |
| -112° F to 248° F<br>-80° C to 120° C | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●       | ●        | ●        | ●          | ●                                  | ●                                       | ●                                  | ●                                      | N/A  | Image Lock  |

**Labels**

**Performance Characteristics:** ● Recommended ● Test In Your Application **NR** Not Recommended

| Product Name  | Thermal Transfer (TT)<br>Direct Thermal (DT) | Product Description   | Applications  | Minimum Application Temperature |
|---|--|---|---|---------------------------------|
| <b>Specialty (continued)</b> White, synthetic labels designed for unique or challenging applications. |  |   |   |                                 |
| 8000T Low-Temp Matte  | TT   | Matte polyolefin label with a cold-temp permanent acrylic adhesive that offers -112° F /-80° C performance for low-temperature use; provides resistance to repeated freeze and thaw cycles  | Cold-temperature applications down to -112° F/-80° C; cold storage; virology labeling, genetics labeling, DNA sequencing; labeling vials, test tubes, ampules | 50° F<br>10° C                  |
| 8000T CryoCool™   | TT   | Polypropylene label with a cold-temp permanent acrylic adhesive that offers extremely low-temperature performance down to -320° F/196° C  | Cryogenic applications involving a deep freezing process; medical labs, hospitals   | -20° F<br>-29° C                |
| 8000T Low-Temp Gloss  | TT   | Gloss polypropylene label with a cold-temp permanent acrylic adhesive that offers -112° F /-80° C performance for low-temperature use; provides outdoor durability for 1-2 years; available in white  | Cold-temperature applications down to -112° F /-80° C; cold storage; virology labeling, genetics labeling, DNA sequencing; steam sterilization                | 50° F<br>10° C                  |
| 8000T Primary Blood Bag   | TT   | Polypropylene label with an all-temp acrylic adhesive; compliant with FDA 175.105   | Primary blood bag labeling; IV bag labeling   | -20° F<br>-29° C                |
| 8000T Blood Bag   | TT   | Polypropylene label with a permanent acrylic adhesive   | Secondary blood bag labeling. Should not be applied directly to blood bag   | 45° F<br>7° C                   |
| 8000T Jewelry   | TT   | Polypropylene label with a permanent acrylic adhesive; provides high print quality and smudge resistance; available in custom colors  | Ideal for jewelry and ring labels; safe to use in jewelry steamers and cleaners   | 45° F<br>7° C                   |
| 8000D Jewelry   | DT   | Polypropylene label with a permanent acrylic adhesive; UV shield provides resistance to ultraviolet light; available in custom colors   | Ideal for jewelry and ring labels; safe to use in jewelry cleaners  | -10° F<br>-23° C                |
| Z-Slip  | DT   | Direct thermal paper tag combined with a clear polypropylene label featuring a permanent acrylic adhesive   | Packing slip, invoice and compliance labeling   | 23° F<br>-5° C                  |
| 8000D Shelf Label   | DT   | Matte polypropylene label with an all-temp acrylic adhesive. Features a varnish that protects the image, allowing the 8000D Shelf Talker Clear to be placed over it and removed cleanly   | Shelf label that withstands refrigeration and freezing  | -20° F<br>-29° C                |
| 8000T GHS Laminare <b>NEW ITEM</b>  | TT   | Thermal transfer white polypropylene label with a clear gloss polyester overlamine and permanent acrylic adhesive. Overlamine provides added durability for pre-printed red diamonds against abrasion and chemicals. BS 5609 Section 2 and 3 certified when paired with 5095 resin ribbon.  | Chemical drum labeling; GHS applications with pre-printed color, specifically those requiring BS 5609 Section 2 and 3 compliance                              | 45° F<br>7° C                   |
| 8000T Ultra High-Tack Matte   | TT   | Matte polyester label with a high-tack permanent acrylic adhesive for difficult-to-label surfaces   | Asset and machinery tracking; labeling textured surfaces, plastic, painted or bare metal and wood; UID compliance   | 50° F<br>10° C                  |
| 8000T RetroScan   | TT   | Silver gloss retro-reflective polyester label with a permanent acrylic adhesive designed specifically for long-range scanning   | Indoor warehouse bin/shelf/location labels for long-range scanning  | 45° F<br>7° C                   |
| 8000T ESD Gloss   | TT   | Gloss polyester electrostatic dissipative label with a high-temp permanent acrylic adhesive; meets ESD S11.11 Surface Resistance Test requirements  | Applications requiring resistance to electrostatic discharge; circuit boards, disk drives, and other sensitive electronic components                          | 50° F<br>10° C                  |
| 8000T Piggyback Clear Matte   | TT   | Piggyback matte polyester label with a permanent acrylic adhesive that can be over-laminated with a clear polyester liner   | Asset management labeling; chemical containers; automotive labeling; UID compliance   | 50° F<br>10° C                  |
| 8000T Void Gloss  | TT   | White gloss polyester label with a tamper-proof adhesive that leaves a "void" pattern when label is removed   | Serial number plates; warranty/authenticity label; tamper-evident security labels; capital asset labeling   | 50° F<br>10° C                  |
| 8000T Void Matte Silver   | TT   | Matte polyester label with a tamper-proof adhesive that leaves a "void" pattern when label is removed; UL acceptances   | Serial number plates; warranty/authenticity label; tamper-evident security labels; capital asset labeling   | 50° F<br>10° C                  |
| 8000T Checkerboard Gloss Silver   | TT   | Silver gloss polyester label with a tamper-proof adhesive that leaves a checkerboard pattern when label is removed; maintains tamper evidence feature up to 176° F /80° C   | Security and product authentication applications such as cellular phones  | 50° F<br>10° C                  |
| 8000T GHS Polyester <b>NEW ITEM</b>   | TT   | Thermal transfer white matte polyester label with a permanent acrylic adhesive. Provides excellent chemical resistance. Adhesive system designed to bond well to painted steel, fiber and plastic drums. BS 5609 Section 2 and 3 certified when paired with 5095 resin ribbon and Red Resin ribbon.   | Chemical drum labeling; GHS applications, specifically those requiring BS 5609 Section 2 and 3 compliance   | 10° F<br>-12° C                 |
| 8000T GHS Vinyl <b>NEW ITEM</b>   | TT   | Thermal transfer matte white vinyl label with a permanent acrylic adhesive. Offers exceptional flexibility for curved surfaces and excellent chemical resistance. Adhesive system designed to bond well to painted steel, fiber and plastic drums. BS 5609 Section 2 and 3 certified when paired with 5095 resin ribbon and Red Resin ribbon. | Chemical drum labeling; GHS applications, specifically those requiring BS 5609 Section 2 and 3 compliance   | 10° F<br>-12° C                 |

Synthetic Labels

| Service Temperature                   | Surfaces to be Labeled |       |                 |               |                 |                |                 | Environment    |         | Resistance |          |          |                                    |   | Suggested Ribbons                  |  |  |   |
|---------------------------------------|------------------------|-------|-----------------|---------------|-----------------|----------------|-----------------|----------------|---------|------------|----------|----------|------------------------------------|---|------------------------------------|--|--|---|
|                                       | Corrugate              | Paper | Packaging Films | Most Plastics | Metal and Glass | Rough Surfaces | Curved Surfaces | Moist Surfaces | Indoors | Outdoors   | Moisture | Abrasion | Chemical-Weak (ie. Window Cleaner) | Chemical-Moderate (ie. Alcohol, Bleach) | Chemical-Harsh (ie. Gasoline, Oil) | Chemical-Extreme (ie. Acetone, Xylene) | Standard Application-Weak and Moderate Chemicals | High Durability-Abrasion, Harsh and Extreme Chemicals |
| -112° F to 200° F<br>-80° C to 93° C  | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●       | ●          | ●        | ●        | ●                                  | ●                                       | ●                                  | NR                                     | 5555   | 3200  |
| -320° F to 190° F<br>-196° C to 88° C | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●       | ●          | ●        | ●        | ●                                  | ●                                       | ●                                  | NR                                     | 5095   | 5095  |
| -112° F to 200° F<br>-80° C to 93° C  | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●       | ●          | ●        | ●        | ●                                  | ●                                       | ●                                  | NR                                     | 5095   | 5095  |
| -65° F to 200° F<br>-54° C to 93° C   | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●       | ●          | ●        | ●        | ●                                  | ●                                       | ●                                  | NR                                     | 5555, 3200                                       | 5586  |
| -40° F to 250° F<br>-40° C to 120° C  | ●                      | ●     | NR              | NR            | ●               | ●              | ●               | ●              | ●       | ●          | ●        | ●        | ●                                  | ●                                       | ●                                  | NR                                     | 5555, 3200                                       | 5586  |
| -40° F to 250° F<br>-40° C to 121° C  | ●                      | ●     | NR              | NR            | ●               | ●              | ●               | ●              | ●       | ●          | ●        | ●        | ●                                  | ●                                       | ●                                  | NR                                     | 3200, 5586                                       | 5095  |
| -40° F to 120° F<br>-40° C to 49° C   | ●                      | ●     | NR              | NR            | ●               | ●              | ●               | ●              | NR      | ●          | ●        | ●        | ●                                  | NR                                      | NR                                 | NR                                     | N/A  | N/A   |
| -20° F to 131° F<br>-29° C to 55° C   | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●       | ●          | ●        | ●        | ●                                  | ●                                       | ●                                  | ●                                      | N/A  | N/A   |
| -40° F to 150° F<br>-40° C to 66° C   | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | NR      | ●          | ●        | ●        | NR                                 | NR                                      | NR                                 | NR                                     | N/A  | N/A   |
| -65° F to 200° F<br>-54° C to 93° C   | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●       | ●          | ●        | ●        | ●                                  | ●                                       | ●                                  | NR                                     | 5095   | 5095  |
| -20° F to 302° F<br>-29° C to 150° C  | ●                      | ●     | ●               | ●             | ●               | ●              | NR              | ●              | ●       | ●          | ●        | ●        | ●                                  | ●                                       | ●                                  | NR                                     | 5555, 3200                                       | 5586  |
| -40° F to 300° F<br>-40° C to 149° C  | ●                      | ●     | ●               | ●             | ●               | ●              | NR              | ●              | ●       | ●          | ●        | ●        | ●                                  | ●                                       | ●                                  | NR                                     | 5095   | 5095  |
| -40° F to 302° F<br>-40° C to 150° C  | ●                      | ●     | ●               | ●             | ●               | ●              | NR              | ●              | ●       | ●          | ●        | ●        | ●                                  | ●                                       | ●                                  | NR                                     | 5095   | 5100  |
| -40° F to 302° F<br>-40° C to 150° C  | ●                      | ●     | ●               | ●             | ●               | ●              | NR              | ●              | ●       | ●          | ●        | ●        | ●                                  | ●                                       | ●                                  | ●                                      | 2000, 2100, 5319                                 | 3200  |
| -40° F to 158° F<br>-40° C to 70° C   | NR                     | NR    | ●               | ●             | ●               | ●              | NR              | ●              | ●       | ●          | ●        | ●        | ●                                  | ●                                       | ●                                  | NR                                     | 5095   | 5100  |
| -40° F to 104° F<br>-40° C to 40° C   | NR                     | NR    | ●               | ●             | ●               | ●              | NR              | ●              | ●       | ●          | ●        | ●        | ●                                  | ●                                       | ●                                  | NR                                     | 5555, 3200                                       | 5586  |
| -40° F to 176° F<br>-40° C to 80° C   | NR                     | NR    | ●               | ●             | ●               | ●              | NR              | ●              | ●       | ●          | ●        | ●        | ●                                  | ●                                       | ●                                  | NR                                     | 5095   | 5100  |
| -40° F to 302° F<br>-40° C to 150° C  | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●       | ●          | ●        | ●        | ●                                  | ●                                       | ●                                  | NR                                     | 5095 & Red Resin                                 | 5095 & Red Resin                                      |
| -40° F to 176° F<br>-40° C to 80° C   | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●       | ●          | ●        | ●        | ●                                  | ●                                       | ●                                  | NR                                     | 5095 & Red Resin                                 | 5095 & Red Resin                                      |



**Labels**

Performance Characteristics: ● Recommended ● Test In Your Application **NR** Not Recommended

| Product Name  | Thermal Transfer (TT)<br>Direct Thermal (DT) | Product Description  | Applications  | Minimum Application Temperature |
|---|--|--|---|---------------------------------|
| <b>Specialty (continued)</b> White, synthetic labels designed for unique or challenging applications. |  |  |   |                                 |
| 8000T Z-Destruct™   | TT   | Vinyl label with a permanent acrylic adhesive that destructs when label is removed   | Serialized data and warranty labels; applications requiring destructible solution; ideal for high-value electronics           | 50° F<br>10° C                  |
| 8000T Vinyl Clear   | TT   | Clear matte vinyl label with a permanent acrylic adhesive that is highly flexible  | Wrap around wire labeling; wrap around vial or tube labeling  | 50° F<br>10° C                  |
| 8000T Vinyl Outlast   | TT   | White semi-gloss vinyl label with a permanent acrylic adhesive; offers excellent flexibility for curved surfaces; provides outdoor durability of 5 years and excellent UV resistance | Vial or tube labeling; warranty labeling; safety warning labels; outdoor piping requiring outdoor durability of up to 5 years | 50° F<br>10° C                  |
| 8000T Cling   | TT   | Gloss static cling vinyl label   | Oil change, preventive maintenance and service. Temporary parking stickers.   | 32° F<br>0° C                   |

**Synthetic Labels**

**Tags**

Performance Characteristics: ● Recommended ● Test In Your Application **NR** Not Recommended

| Product Name  | Thermal Transfer (TT)<br>Direct Thermal (DT) | Product Description  | Applications  |
|---|--|--|---|
| <b>Z-Perform</b> Bright white, smooth paper facestock that provides the optimal balance between performance and price for industrial applications. Recommended for indoor use.  |  |  |   |
| 1000T Tag   | TT   | Uncoated paper tag available in 7.5 and 9.5 mil thickness  | General-purpose ticketing; retail hang tags; inventory and shop floor tracking tickets                                      |
| 1000D Tag   | DT   | Uncoated paper tag available in 5.3 mil thickness  | General-purpose ticketing; retail hang tags; inventory and shop floor tracking tickets                                      |
| <b>Z-Select</b> Premium, bright white, ultra-smooth paper facestock specially coated to provide optimal quality. Ideal for high-speed printing applications where print quality is important. Recommended for indoor use.   |  |  |   |
| 4000T Tag   | TT   | Paper tag available in 5.0, 7.0, and 9.0 mil thickness   | General-purpose ticketing; retail hang tags; inventory control and shop floor tracking tickets                              |
| 4000D Tag   | DT   | Paper tag available in 5.3 and 7.5 mil thickness   | General-purpose ticketing; shop floor tracking tickets; retail hang tag   |
| <b>PolyPro</b> White, matte polypropylene facestock that provides high print quality and resistance to scratching and smearing; offers some flexibility for labeling curved surfaces. Thermal transfer materials recommended for applications that require up to 1-2 years outdoors; temperature exposure up to 250° F. |  |  |   |
| 4000T Tag   | TT   | Polypropylene tag available in 7.0 and 8.5 mil thickness   | Outdoor, general purpose tagging; wire marking, visitor passes, bin tags, pallets   |
| <b>Z-Ultimate</b> White, gloss polyester facestock that provides outstanding print quality and unparalleled smear and scratch resistance. Offers good resistance to chemicals. Recommended for applications that require up to 3 years outdoors; temperature exposure up to 300° F.                                     |  |  |   |
| 4000T Tag   | TT   | Gloss polyester laminated tag available in 8 mil thickness   | Tags requiring high environmental resistance; outdoor storage tags; water immersed tags, steel tags; high-quality hang tags |
| <b>Specialty</b> White, synthetic tags designed for unique or challenging applications.   |  |  |   |
| 8000T Light-Weight Tag  | TT   | Tyvek® olefin tag that provides tear resistance and durability; lightweight; available in 8.0 mil thickness                | Sewn-in tags, lawn tags, garment tags; seat belts; greenhouse and nursery tags; staple-on tags; outdoor storage             |
| 8000T Tuff Tag  | TT   | V-Max® polyolefin tag that provides tear strength and outdoor use up to 1-2 years; available in 7.0 mil thickness          | Nursery tags; lumber tags; outdoor storage tags   |
| 8000T Ultra-Tuff Tag  | TT   | Valéron® polyethylene tag that provides the highest tear resistance and durability; available in 7.5 and 9.5 mil thickness | Nursery tags; lumber tags; construction applications; outdoor storage tags  |
| 8000T Nylon Tag   | TT   | Woven nylon tag that may be sewn into clothing; provides outstanding print quality; available in 5.7 mil thickness         | Seat belt tagging; care tag applications  |

**Synthetic Tags**

| Service Temperature                  | Surfaces to be Labeled |       |                 |               |                 |                |                 |                | Environment |          |          |          | Resistance                         |   |                                    |  | Suggested Ribbons                                |   |
|--------------------------------------|------------------------|-------|-----------------|---------------|-----------------|----------------|-----------------|----------------|-------------|----------|----------|----------|------------------------------------|---|------------------------------------|--|--|---|
|                                      | Corrugate              | Paper | Packaging Films | Most Plastics | Metal and Glass | Rough Surfaces | Curved Surfaces | Moist Surfaces | Indoors     | Outdoors | Moisture | Abrasion | Chemical-Weak (ie. Window Cleaner) | Chemical-Moderate (ie. Alcohol, Bleach) | Chemical-Harsh (ie. Gasoline, Oil) | Chemical-Extreme (ie. Acetone, Xylene) | Standard Application-Weak and Moderate Chemicals | High Durability-Abrasion, Harsh and Extreme Chemicals |
| -60° F to 250° F<br>-51° C to 121° C | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●           | ●        | ●        | ●        | ●                                  | ●                                       | ●                                  | NR                                     | 3200, 5586                                       | 5095  |
| -40° F to 176° F<br>-40° C to 80° C  | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●           | ●        | ●        | ●        | ●                                  | ●                                       | NR                                 | NR                                     | 5555, 3200                                       | 5586, 5095  |
| -40° F to 170° F<br>-40° C to 77° C  | ●                      | ●     | ●               | ●             | ●               | ●              | ●               | ●              | ●           | ●        | ●        | ●        | ●                                  | NR                                      | NR                                 | 5555                                   | 5095   |   |
| -40° F to 200° F<br>-40° C to 93° C  | ●                      | ●     | ●               | ●             | ●               | ●              | NR              | NR             | ●           | ●        | ●        | NR       | ●                                  | ●                                       | ●                                  | 3200 (white), 5319 (clear)             | N/A  |   |

| Minimum Application Temperature | Service Temperature                  | Environment |          |          |          | Resistance                         |   |                                    |  | Suggested Ribbons                                |   |
|---------------------------------|--------------------------------------|-------------|----------|----------|----------|------------------------------------|---|------------------------------------|--|--|---|
|                                 |                                      | Indoors     | Outdoors | Moisture | Abrasion | Chemical-Weak (ie. Window Cleaner) | Chemical-Moderate (ie. Alcohol, Bleach) | Chemical-Harsh (ie. Gasoline, Oil) | Chemical-Extreme (ie. Acetone, Xylene) | Standard Application-Weak and Moderate Chemicals | High Durability-Abrasion, Harsh and Extreme Chemicals |
| N/A                             | -50° F to 200° F<br>-46° C to 93° C  | ●           | NR       | NR       | ●        | ●                                  | NR                                      | NR                                 | NR                                     | 2000, 5319                                       | N/A   |
| N/A                             | -40° F to 140° F<br>-40° C to 60° C  | ●           | NR       | NR       | ●        | ●                                  | NR                                      | NR                                 | NR                                     | N/A  | N/A   |
| N/A                             | -40° F to 200° F<br>-40° C to 93° C  | ●           | NR       | ●        | ●        | ●                                  | NR                                      | NR                                 | NR                                     | 2000, 2100, 5319                                 | 5555, 3200  |
| N/A                             | -40° F to 140° F<br>-40° C to 60° C  | ●           | NR       | ●        | ●        | ●                                  | NR                                      | NR                                 | NR                                     | N/A  | N/A   |
| N/A                             | -40° F to 200° F<br>-40° C to 93° C  | ●           | ●        | ●        | ●        | ●                                  | ●                                       | ●                                  | ●                                      | 3200, 5586                                       | 5095  |
| N/A                             | -40° F to 200° F<br>-40° C to 93° C  | ●           | ●        | ●        | ●        | ●                                  | ●                                       | ●                                  | NR                                     | 5095   | 5100  |
| N/A                             | -40° F to 200° F<br>-40° C to 93° C  | ●           | ●        | ●        | ●        | ●                                  | ●                                       | NR                                 | NR                                     | 2000, 5319                                       | 3200  |
| N/A                             | -70° F to 200° F<br>-57° C to 93° C  | ●           | ●        | ●        | ●        | ●                                  | ●                                       | NR                                 | NR                                     | 5555, 3200                                       | 5586  |
| N/A                             | -70° F to 200° F<br>-57° C to 93° C  | ●           | ●        | ●        | ●        | ●                                  | ●                                       | ●                                  | NR                                     | 5555, 3200                                       | 5586  |
| N/A                             | -40° F to 302° F<br>-40° C to 150° C | ●           | ●        | ●        | ●        | ●                                  | ●                                       | ●                                  | NR                                     | N/A  | Nylon Ribbon  |

## Receipts

Performance Characteristics: ● Recommended ● Test In Your Application ● NR Not Recommended

|                    | Product Name  | Thermal Transfer (TT) | Product Description  | Applications  |
|--------------------|---|-----------------------|--|---|
|                    |   | Direct Thermal (DT)   |  |   |
| Paper Receipts     | <b>Z-Perform</b> Bright white, smooth paper facestock that provides the optimal balance between performance and price for industrial applications. Recommended for indoor use.  |                       |  |   |
|                    | 1000D Receipt   | DT                    | Premium receipt paper that offers excellent quality at a low cost  | General purpose mobile workforce applications including route accounting and field service                        |
|                    | <b>Z-Select</b> Premium, bright white, ultra-smooth paper facestock specially coated to provide optimal quality. Ideal for high-speed printing applications where print quality is important. Recommended for indoor use. |                       |  |   |
|                    | 4000D Receipt   | DT                    | Receipt paper featuring a topcoat that allows for exceptional long-life durability and resistance  | Mobile workforce applications including route accounting and field service  |
|                    | 4000T Receipt   | TT                    | Receipt paper available in 3.0 mil thickness   | Staple-on tickets; plastic bag inserts; packing lists   |
| Specialty          | White receipt paper designed for unique or challenging applications. Recommended for indoor use.  |                       |  |   |
|                    | 8000D High-Temp Receipt   | DT                    | Receipt paper that provides temperature resistance up to 194° F/90° C; offers superior durability under fluorescent bulbs and partial UV exposure (through a window) | Mobile workforce applications that will be exposed to high temperature including e-citation                       |
|                    | <b>PolyPro</b> White, matte polypropylene facestock that provides high print quality and resistance to scratching and smearing.   |                       |  |   |
| Synthetic Receipts | 4000D Receipt   | DT                    | Polypropylene receipt paper that is waterproof and tearproof   | Mobile workforce applications, such as e-citation, that will be exposed to moisture and require a durable receipt |

| Thickness (Mil) | Service Temperature                 | Archivability | Topcoated | Sensitivity                    | Environment |          | Resistance |          |                                    |   | Suggested Ribbons                  |  |  |   |
|-----------------|-------------------------------------|---------------|-----------|--------------------------------|-------------|----------|------------|----------|------------------------------------|---|------------------------------------|--|--|---|
|                 |                                     |               |           |                                | Indoors     | Outdoors | Moisture   | Abrasion | Chemical-Weak (ie. Window Cleaner) | Chemical-Moderate (ie. Alcohol, Bleach) | Chemical-Harsh (ie. Gasoline, Oil) | Chemical-Extreme (ie. Acetone, Xylene) | Standard Application-Weak and Moderate Chemicals | High Durability-Abrasion, Harsh and Extreme Chemicals |
| 2.4 or 3.5      | -40° F to 140° F<br>-40° C to 60° C | 10 years*     | No        | 2.4 mil-Medium<br>3.5 mil-High | ●           | NR       | NR         | ●        | NR                                 | NR                                      | NR                                 | NR                                     | N/A  | N/A   |
| 3.2             | -40° F to 140° F<br>-40° C to 60° C | 25 years*     | Yes       | High                           | ●           | NR       | ●          | ●        | ●                                  | NR                                      | NR                                 | NR                                     | N/A  | N/A   |
| 3.0             | -40° F to 200° F<br>-40° C to 93° C | 10 years*     | Yes       | N/A                            | ●           | NR       | ●          | ●        | ●                                  | NR                                      | NR                                 | NR                                     | 2000, 2100, 5319                                 | 5555, 3200  |
| 3.2             | -40° F to 194° F<br>-40° C to 90° C | 20 years*     | Yes       | N/A                            | ●           | ●        | ●          | ●        | ●                                  | NR                                      | NR                                 | NR                                     | N/A  | N/A   |
| 3.8             | -40° F to 140° F<br>-40° C to 60° C | 10 years*     | Yes       | High                           | ●           | ●        | ●          | ●        | ●                                  | NR                                      | NR                                 | NR                                     | N/A  | N/A   |

\* The thermal image will remain legible for the archival life provided the image is fully developed on the recommended thermal printer and the document is stored with compatible materials under proper storage conditions

## Wristbands

Performance Characteristics: ● Recommended ● Test In Your Application ● NR Not Recommended

|                      | Product Name   | Thermal Transfer (TT) | Product Description  | Applications  |
|----------------------|--|-----------------------|--|---|
|                      |  | Direct Thermal (DT)   |  |   |
| Synthetic Wristbands | <b>Z-Band®</b> Synthetic wristbands uniquely configured for optimal use in Zebra tabletop and desktop printers. Each material provides durability and security enhancements including security slits, void features, or clip closures. |                       |  |   |
|                      | UltraSoft  | DT                    | Soft, flexible polypropylene and vinyl wristband with an adhesive tab for securement and a silver antimicrobial coating; tamper-evident; MR-Safe; Scannable up to 14 days                                | Patient identification in healthcare facilities   |
|                      | Comfort  | DT                    | Light-weight, flexible polypropylene wristband with an adhesive tab for securement and a silver antimicrobial coating; tamper-evident; color-coding options; latex-free; MR-Safe; Scannable up to 7 days | Patient identification in healthcare facilities   |
|                      | Direct   | DT                    | Polypropylene wristband with an adhesive tab for securement; tamper-evident slits, color-coding options; latex free; MR-safe; Scannable up to 14 days  | Patient identification in healthcare facilities   |
|                      | QuickClip™   | DT                    | Polypropylene wristband with secure clip closure; color clips available; latex free; MR-safe; Scannable up to 14 days  | Patient identification in healthcare facilities   |
|                      | Soft Infant  | DT                    | Polypropylene wristband with a soft nylon lining delicate enough for fragile skin. Features an adhesive closure; latex free; MR-safe   | Patient identification in healthcare facilities of infants with sensitive skin  |
|                      | 4000   | TT                    | Thermal transfer, white, gloss polyester wristband with a permanent acrylic adhesive; latex free; Scannable up to 14 days  | Patient identification in healthcare facilities   |
|                      | Fun  | DT                    | Polypropylene wristband with an adhesive tab for securement. For one-day use and minimal water exposure in the recreation market   | Guest identification, tracking and access control. Cashless point of sale for food and merchandise. Ideal for carnivals/amusement parks, fairs/festivals, theme parks, zoos/aquariums, sporting events, concerts and nightclubs |
|                      | Splash   | DT                    | Polypropylene wristband with an adhesive tab for securement. For multi-day use and excessive water exposure in the recreation market   | Guest identification, tracking and access control. Cashless point of sale for food and merchandise. Ideal for water parks, resorts and cruise lines.  |

| Closure Type | Service Temperature                  | Environment |          | Resistance |          |                                    |   | Suggested Ribbons                  |  |  |   |
|--------------|--------------------------------------|-------------|----------|------------|----------|------------------------------------|---|------------------------------------|--|--|---|
|              |                                      | Indoors     | Outdoors | Moisture   | Abrasion | Chemical-Weak (ie. Window Cleaner) | Chemical-Moderate (ie. Alcohol, Bleach) | Chemical-Harsh (ie. Gasoline, Oil) | Chemical-Extreme (ie. Acetone, Xylene) | Standard Application-Weak and Moderate Chemicals | High Durability-Abrasion, Harsh and Extreme Chemicals |
| Adhesive     | -40° F to 140° F<br>-40° C to 60° C  | ●           | ●        | ●          | ●        | ●                                  | ●                                       | NR                                 | NR                                     | N/A  | N/A   |
| Adhesive     | -40° F to 140° F<br>-40° C to 60° C  | ●           | ●        | ●          | ●        | ●                                  | ●                                       | NR                                 | NR                                     | N/A  | N/A   |
| Adhesive     | -40° F to 140° F<br>-40° C to 60° C  | ●           | ●        | ●          | ●        | ●                                  | ●                                       | NR                                 | NR                                     | N/A  | N/A   |
| Clip         | -40° F to 140° F<br>-40° C to 60° C  | ●           | ●        | ●          | ●        | ●                                  | ●                                       | NR                                 | NR                                     | N/A  | N/A   |
| Adhesive     | -40° F to 140° F<br>-40° C to 60° C  | ●           | ●        | ●          | ●        | ●                                  | ●                                       | NR                                 | NR                                     | N/A  | N/A   |
| Adhesive     | -20° F to 300° F<br>-29° C to 149° C | ●           | ●        | ●          | ●        | ●                                  | ●                                       | ●                                  | NR                                     | 5095   | 5100  |
| Adhesive     | -40° F to 140° F<br>-40° C to 60° C  | ●           | ●        | ●          | ●        | ●                                  | ●                                       | NR                                 | NR                                     | N/A  | N/A   |
| Adhesive     | -40° F to 140° F<br>-40° C to 60° C  | ●           | ●        | ●          | ●        | ●                                  | ●                                       | NR                                 | NR                                     | N/A  | N/A   |

# REDUCE TICKET FRAUD AND REVENUE LOSS



Looking to increase guest spending and reduce ticket fraud? Zebra's new economical, bar coded, print-on-demand wristbands enable cashless point of sale and access management.

- For one-day use: economical **Z-Band® Fun**.
- For multiple days or excessive water exposure: **Z-Band® Splash**

Discover the advantages. Visit [www.zebra.com](http://www.zebra.com).



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