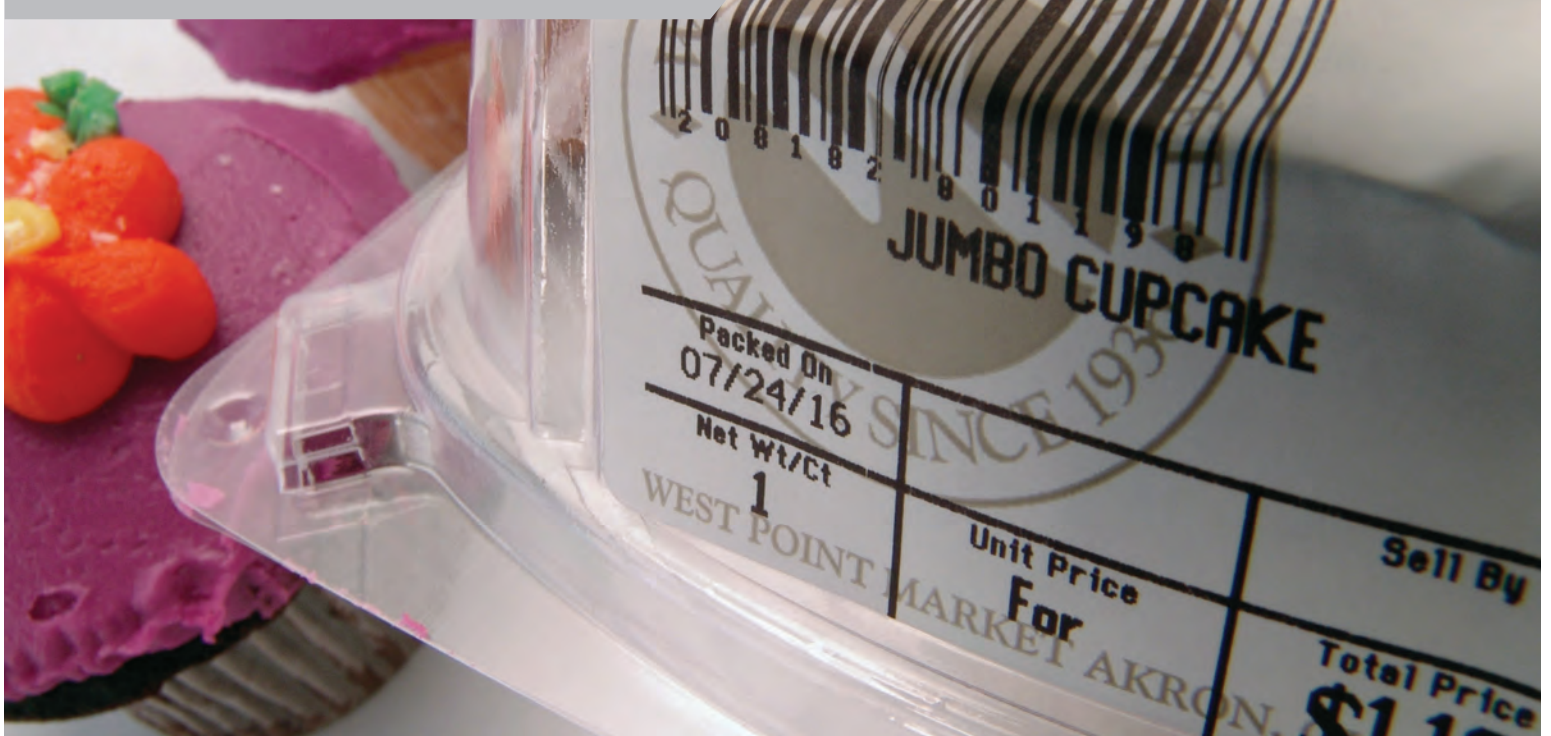


# DIRECT THERMAL FILMS & PAPER

*Industrial, Shelf Marking, Weight Scale,  
Packaging and Medical Labels*



## Roll Label

PSA-coated papers and films in roll-to-roll form. Extensive product options, available customization, varying roll lengths and widths, and customer friendly services, like our Mactac Precise<sup>SM</sup> Program, which offers a precise amount of material needed for small runs and limited applications.

[www.mactac.com/rolllabel](http://www.mactac.com/rolllabel)

Mactac<sup>®</sup> offers a wide variety of medium to high sensitivity paper and film Direct Thermal products that are ideal for use where high-reliability bar code scanning is required. Whether it's topcoating for added environmental resistance, or the ability to scan at higher wave lengths, Mactac has the facstock to meet your needs. By combining the appropriate facstock and adhesive to perform in your application, Mactac's product line offers you the solution.

## Direct Thermal Film Products

Products	DBH 3.0 Mil Medium Sensitivity	DPI 3.0 Mil Medium Sensitivity	DPT 4.2 Mil High Sensitivity
<b>CHILL AT®</b> -10°F (-23°C) App -65°F to +150°F Range			DPT7802
<b>CHILL AT® EXTREME</b> -10°F (-23°C) App -65°F to +150°F Range			DPT7902 Precise P10
<b>Infusion®</b> +20°F (-7°C) App -65°F to +150°F Range			DPT1702
<b>ST95</b> +25°F (-4°C) App -75°F to +200°F Range	DBH9501 Precise P5, P10	DPI9501 Precise P10	
<b>XT99</b> +32°F (0°C) App -75°F to +200°F Range		DPI9901	
<b>640AT</b> -20°F (-29°C) App -65°F to +200°F Range	DBH2601 Precise P5, P10	DPI2601	
Applications	DBH 3.0 Mil	DPI 3.1 Mil	DPT 4.2 Mil
<b>Medical Labeling</b>	✓	✓	
<b>Airline Baggage Tag</b>			✓
<b>Shelf Marking</b>	✓	✓	
<b>Poultry Packaging</b>		✓	✓
<b>Ski Lift Tickets</b>			✓
<b>Address Labels</b>			
<b>Industrial Warehouse</b>	✓	✓	✓
<b>General Durable</b>	✓	✓	✓

Information above is general guidelines in selecting a Direct Thermal Film. As always, Mactac strongly recommends extensive testing to determine suitability.

**Simply DT™** is the brand name for Mactac direct thermal facestocks manufactured without Bisphenols.

Note: Precise Parts are subject to change.

\* Human Readable Only

For an up to date listing of Precise, please visit [www.mactac.com/precise](http://www.mactac.com/precise).

## Direct Thermal Paper Products

Products	Top-Coated Paper Medium to High Sensitivity	Simply DT™ Top-Coated Paper Medium Sensitivity	Simply DT Non-Top-Coated Paper Medium Sensitivity	Simply DT Top-Coated Weigh Scale Paper Medium Sensitivity	True IR Scannable TC Paper	Simply DT Optimal Performance	Simply DT Pharmacy Prescription
<b>Infusion®</b> +20°F (-7°C) App -65°F to +150°F Range	TCDT1702NB Precise P5, P10		DTNN1702NB Precise P5, P10  DTNN1752NB-7 Precise P10	DTW1702NB Precise P10  DTW1752NB-7 Precise P10		DLTL1702 P10	
<b>ST95</b> +25°F (-4°C) App -75°F to +200°F Range	DTM9502NB Precise P5, P10  TCDT9502NB P10	DTL9502NB Precise P10  DTL9552NB-7P10 Precise P10	DTNN9502NB Precise P10	DTW9502NB Precise P10	DTR9502 Precise P5, P10	DLTL9502 Precise P10	DDRX9502 Precise P10
<b>XT99</b> +32°F (0°C) App -75°F to +200°F Range	DTM9902NB Precise P10				DTR9902 Precise P10		
<b>XT100</b> +32°F (0°C) App -75°F to +200°F Range	DTM9600NB-52 Precise P5						
<b>CHILL AT®</b> -10°F (-23°C) App -65°F to +150°F Range  <b>CHILL AT® Extreme</b>			DTNN7802NB Precise P10  DTNN7852NB-7 Precise P10	DTW7802NB Precise P5, P10  DTW7852NB-7 Custom  DTW7902NB-P10 Precise P10		DLTL7802 P10	
<b>640AT</b> -20°F (-29°C) App -65°F to +200°F Range	TCDT2602NB Precise P5, P10		DTNN2602NB Precise P10, P15  DTNN2652NB-7 Precise P10	DTW2602NB Precise P10		DLTL2602 Precise P10  DLTL2652-7 P10	
<b>MR 860 Removable</b> -20°F (-29°C) App -65°F to +200°F Range	DTM8602NB Precise P5				DTR9502TR		
<b>HR51 Removable</b> +32°F (0°C) App -40°F to +200°F Range	TCDT5102NB Precise P5, P10						
<b>LT20 Short Term Removable</b> +32°F (0°C) App -40°F to +200°F Range	DTM0902NB						DDRYR0902
Applications	Top-Coated Paper Medium to High Sensitivity	Top-Coated Paper Medium Sensitivity	Simply DT™ Non-Top-Coated Paper Medium Sensitivity	Top-Coated Weigh Scale Paper Medium Sensitivity	True IR Scannable TC Paper	Simply DT Optimal Performance	Simply DT Pharmacy Prescription
<b>Distribution/Shipping Labeling</b>	✓	✓	✓	✓		✓	
<b>Meat Packaging/Food Packaging Labeling</b>	✓			✓			
<b>Bakery Labeling</b>	✓			✓			
<b>Retail Labeling</b>	✓						
<b>Medical Diagnostic/Vial Labeling</b>	✓	✓			✓		
<b>Pharmacy Prescription Labeling</b>							✓

Information above is general guidelines in selecting a Direct Thermal Paper. As always, Mactac strongly recommends extensive testing to determine suitability.  
Note: Precise Parts are subject to change.

# DIRECT THERMAL FILMS & PAPER

## Shelf Life & Storage of Direct Thermal Products

### Optimal Storage Conditions

Before imaging, the shelf life of Mactac adhesive laminated direct thermal products is approximately one year from the date of shipment when stored under the following conditions:

- Temperature 72°F
- Relative humidity 50%
- Stored in a dark environment, avoiding natural or artificial light
- In sealed packaging and avoiding contact with chemicals such as plasticizers, oils, solvents and water.

***These are the conditions under which the full 1 year shelf life can be achieved.***

Higher humidity and higher temperatures can affect shelf life. Specific time frames based on incremental changes in temperature and humidity are impossible to compute.

**CALL 1-800-548-3456 for additional  
product information**

## Environmental Conditions Impacting Direct Thermal

It is most important to understand a few key points related to direct thermal products.

- High temperature will accelerate the aging process, which will involve some degradation of thermal imaging characteristics and discoloration.
- Very high temperatures close to 150°F may begin to pre-activate the thermal coating, causing a light gray appearance. As temperatures increase to about 170°F, the image will become dark black (heat resistant grades are available to prevent pre-activation up to about 190°F).
- Humidity increases the aging affect of heat, with high humidity and high heat being the most undesirable combination. Low humidity is generally not a problem with respect to imaging characteristics or appearance of the paper surface or coating. However, paper is reactive to changes in temperature and low humidity and may cause the stock to tend to curl when giving off some amount of its inherent moisture content into a low humidity surrounding (inversely; stock may take on additional moisture in high humidity).
- Prolonged exposure to open air environments with airborne contaminants can cause oxidation which may tend to discolor the stock through low grade activation, typically occurring in conjunction with light and/or heat.
- Although virtually any direct light will have an affect on direct thermal stocks, the ultraviolet component of direct sunlight will have a more pronounced yellowing effect on direct thermal products than indoor fluorescent lighting. However prolonged exposure to indoor fluorescent lighting and/or incandescent lighting can also influence background discoloration.

**IMPORTANT NOTICE:** The information given and the recommendations made herein are based on our research and are believed to be accurate, but no guarantee of their accuracy or completeness is made. In every case, user shall determine before using any product in full scale production, or in any way, whether such product is suitable for user's intended use for their particular purpose under their own operating conditions. User assumes all risk and liability whatsoever in connection with their use of any product. The products discussed herein are sold without any warranty as to merchantability or fitness for a particular purpose, or any other warranty, express or implied. No representative of ours has any authority to waive or change the foregoing provisions, and no statement or recommendation not contained herein shall have any force of effect unless in an agreement signed by the officers of seller and manufacturer. Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute a permission, inducement or recommendation to practice any invention covered by any patent without authority from the owner of the patent. The following is made in lieu of all warranties, express or implied: Seller's and manufacturer's only obligation shall be to replace or credit such quantity of the product proved to be defective at its discretion.

