



## Direct Thermal Labels

Direct thermal labels are available in paper or synthetic formats. 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.

SIZE	QTY/ROLL	ROLLS/CASE
3" x 2"	2750	6
3" x 4"	1400	6
3" x 5"	1100	6
3.5" x 8"	750	4
4" x 2"	2750	4
4" x 3"	1800	4
4" x 4"	1400	4
4" x 6"	1000	4
4" x 6.5"	900	4

These are just some of the labels we have available. Ask your Account Manager for more details!

## Thermal Transfer Labels

Thermal transfer technology utilizes a ribbon and matching label-stock material to transfer an image onto the label material. Available in perforated and non-perforated. White is standard but some sizes are available in colors.

SIZE	QTY/ROLL	ROLLS/CASE
2" x 1"	5100	8
2" x 1 - 2 up"	10200	4
2" x 1.5"	3500	8
2" x 1.5 - 2 up"	7000	4
2" x 2"	2750	8
2" x 3"	1800	8
3" x 2"	2750	6
3" x 3"	1800	6
3" x 4"	1400	6
3" x 5"	1100	6
3.5" x 8"	750	4
4" x 2"	2750	4
4" x 3"	2000	4
4" x 4"	1400	4
4" x 5"	2000	4
4" x 6"	1000	4
4.25" x 7"	900	4
5" x 3"	1800	4
5" x 4"	1500	4
6" x 4"	1500	4

## Thermal and Direct Thermal Printers

**Thermal printers** are designed to print very high quality labels with or without bar codes and as few as one label at a time or very large batches of labels.

There are two general types of thermal printers: Direct Thermal and Thermal Transfer. Like conventional FAX machines, **direct thermal printers** image the paper directly, using no ribbon, while **thermal transfer printers** use a temperature sensitive inked ribbon that transfers ink to the paper or synthetic label material when heated.

Direct thermal printers use a thermal printhead that applies heat to a chemically treated paper that turns dark as a result of the heat thus creating lines, text and graphics. Direct thermal printing pro-

duces a tag or label that fades with age and will turn black if exposed to heat or strong sunlight. Many restaurant and grocery store receipts are direct thermal technology.

Thermal transfer printers use the same thermal printheads as direct thermal printers, but heat is applied to a ribbon which transfers the image to a substrate (label or tag) creating lines, text and graphics. There are more choices of face materials available with thermal transfer printing.

Labels also come in two main types: direct thermal and thermal transfer. A huge variety of specialty materials and adhesives are available to suit most applications.

# Thermal Transfer Ribbons



**DATAMAX**

**ITW Thermal Films**

**DATU**  
DCS & Labelling Worldwide

**SONY**

**TEC**



## Thermal Transfer Ribbons

DESCRIPTION	SIZE
Wax	1.50" (38mm) x 1181' (360m)
Wax	1.57" (40mm) x 1476' (450m)
Wax	2.36" (60mm) x 984' (300m)
Wax	2.99" (76mm) x 1476' (450m)
Wax	3.00" (76mm) x 1345' (410m)
Wax	3.14" (80mm) x 984' (300m)
Wax	3.27" (83mm) x 1476' (450m)
Wax	3.54" (90mm) x 1476' (450m)
Wax	4.02" (102mm) x 689' (210m)
Wax	4.02" (102mm) x 1181' (360m)
Wax	4.02" (102mm) x 1476' (450m)
Wax	4.50" (114mm) x 1181' (360m)
Wax	5.12" (130mm) x 984' (300m)
Wax	6.02" (153mm) x 1476' (450m)
Wax	6.14" (156mm) x 1476' (450m)
Wax	6.50" (165mm) x 1476' (450m)
Wax	6.85" (174mm) x 1476' (450m)
Wax	8.66" (220mm) x 2461' (625m)
Resin	4.02" (102mm) x 1476' (450m)
Resin	4.33" (110mm) x 1181' (360m)

DESCRIPTION	SIZE
Wax/Resin	0.98" (25mm) x 1181' (360m)
Wax/Resin	1.58" (40mm) x 1181' (360m)
Wax/Resin	2.09" (53mm) x 1181' (360m)
Wax/Resin	2.36" (60mm) x 2953' (900m)
Wax/Resin	2.52" (64mm) x 1181' (360m)
Wax/Resin	2.99" (76mm) x 1969' (600m)
Wax/Resin	3.15" (80mm) x 984' (300m)
Wax/Resin	3.50" (89mm) x 1969' (600m)
Wax/Resin	4.02" (102mm) x 984' (300m)
Wax/Resin	4.02" (102mm) x 1345' (410m)
Wax/Resin	4.02" (102mm) x 1772' (540m)
Wax/Resin	4.17" (106 mm) x 1476' (450m)
Wax/Resin	4.17" (106mm) x 1969' (600m)
Wax/Resin	4.33" (110mm) x 1476' (450m)
Wax/Resin	4.33" (110mm) x 1772' (540m)
Wax/Resin	4.33" (110mm) x 2953' (900m)
Wax/Resin	4.49" (114mm) x 984' (300m)
Wax/Resin	5.12" (130mm) x 984' (300m)
Wax/Resin	5.12" (130mm) x 1476' (450m)
Wax/Resin	6.00" (154mm) x 2953' (900m)
Wax/Resin	6.50" (165mm) x 1345' (410m)
Wax/Resin	6.50" (165mm) x 1476' (450m)
Wax/Resin	6.69" (170mm) x 1772' (540m)
Wax/Resin	8.66" (220mm) x 984' (300m)
Wax/Resin	8.66" (220mm) x 2461' (625m)

## Wax, Wax/Resin and Resin Thermal Transfer Ribbons

The ribbon acts as a buffer between the substrate and the printhead, extending the printhead life. For this reason, the ribbon should always be wider than the width of the tag or label.

Thermal transfer ribbons come in three main types:

- **Wax:** recommended for shipping labels, carton labeling and retail bags. Wax ribbons are for printing onto paper labels, where the life of the label can be years but must be kept dry and must not be abraded or subjected to certain chemicals or oil, which would melt the wax image.



- **Wax/Resin:** increased resin makes labels more smudge and smear-proof and should be used with synthetic and colored labels. Wax/resin ribbons produce a finer image on very smooth paper or coated paper labels. The printed image is much more durable than wax, but can still only stand slight contact with water.
- **Resin:** waterproof, grease, chemical and solvent resistant and are to be used with polyester and synthetic labels. Resin ribbons are formulated to print onto plastic labels such as polyester, polypropylene and vinyl. The ink is designed to slightly dissolve into or adhere to the plastic surface of the label and becomes extremely durable, depending on the plastic material and ribbon used.