



## Top Tips for buying the right labels and ribbons for your printer

Thermal Transfer (TT) and Direct Thermal (DT) printers are the most convenient way of mass producing labels with varying print but how do you go about choosing the right labels and ribbons for your printer and how can you ensure you are getting the best deal? I have put together some tips that might help you.

### Direct Thermal Vs Thermal Transfer

Heat in the print head causes ink on the ribbon to transfer to the paper – hence Thermal Transfer. DT printers require heat sensitive paper where the heat in the print head causes a chemical reaction in the paper causing it to blacken and produce the print. An everyday example of this technology is fax paper. The problem with fax paper is that if you leave it on the window sill for a few weeks it will fade and the print becomes unreadable. This is the same with DT printed labels where TT printed labels will last almost indefinitely. There are direct thermal papers on the market that will last up to 5 years in the right environment but they tend to be more expensive than thermal transfer paper. TT printers are capable of printing direct thermal labels but DT printers cannot because a ribbon carrier mechanism is required. Another factor here is cost. DT labels are more expensive than TT but the latter require a ribbon. On balance low volumes of labels will work out about the same cost but with high volumes DT will probably come out less expensive.

### Paper / ribbon match.

There are many types of label paper of varying quality available, and quality effects the price. How do you determine the best for you? The quality will be influenced by your application. Product labels that will be seen by customers should be of good quality but outer packing labels that will be disposed of and never see by the customer can be of poorer quality, and therefore cheaper. The important thing is that in all cases the information is printed clearly so the paper quality must be matched to the ribbon.

All Thermal transfer printers require a paper that is smoother on the surface than paper normally used in a laser printer or dot matrix. The latter is generally fibrous and if put through a TT printer the paper fibres on the surface will lift the print head away from the label and leave voids in the print. TT paper is always smoother but varies from Vellum to Top Coated. The former is fine for outer case labelling whereas the latter is better for product labelling. The following table will help identify the right material for your requirement.

Application	Label material
Pallet and outer case labelling	Vellum or low grade TT/DT paper
Product or box end labelling	Top coated thermal transfer
Asset labelling	Polyester/polypropylene

Labels, and each type of material requires the correct ribbon. Low quality paper or vellum labels will require a ribbon with high wax content allowing more ink to be absorbed in to the more porous or fibrous surface which will reduce the possibility of voids in the print. Synthetic labels require a ribbon with high resin content so the resin



containing the ink can bond to the surface producing a print that will never scratch off. Ideal for asset labels, high quality product labels or labels for hazardous chemicals etc. The following table will help to decide which ribbon is right for you.

<b>Label material</b>	<b>Ribbon type</b>
Low quality paper and vellum	High wax content ribbon
High quality smooth and top coated paper	Wax / resin ribbon for scratch resistance
Polypropylene, Polyester and Vinyl	Resin ribbon

Printing with a resin ribbon on a poor quality paper will result in poor patchy print and low quality barcodes because not enough ink is being laid down. Increasing the print head temperature will help but will shorten the life of the head. Printing with a wax ribbon on a synthetic label will produce a god quality print but it will rub off very easily because there is no bond to the label material.

### **How to get the best deal**

Label price depends on quantity; the more you buy the cheaper they are. But beware, that doesn't mean that if you place more orders during the year you get a better price. Label manufactures want long runs of labels because it takes just as long to perform the complicated set up of the machines to produce 5K labels as it does to produce 1M labels so when you amortise the set up time in to the cost the higher quantity is of course cheaper. Also the manufactures benefit from buying more raw material. When negotiating a price from a supplier ask them to quote for your yearly supply. If you normally buy, say, 100K labels at a time and they last you, say, three months, multiply that by four. You will find you will make significant savings. Also, if possible reduce the number of sizes of labels you use. If there are only a couple of millimetres difference, combine the quantities if you can. Also reduce the number of different types of material, if you can do so without compromising the quality. All this will increase the quantity of the remaining sizes and reduce the price. The same will go for ribbons.

I hope you find these tips useful and that you have many years of use from your printer. Please remember that TSC Business Solutions can help with your requirements. If you need more information please contact me on 0845 649 2950  
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