

## Thermal Transfer Ribbons – Application Guide

For any durable label application, both print quality and resistance of the printed image when exposed to chemicals and abrasion is essential. In most cases the base label material is identified first as it needs to fulfil its key objective, e.g. a Polyimide material for PCB serial number labels, required to withstand the SMT reflow or direct wave processes.

The ribbon choice however is more complex and the range of thermal transfer ribbons is vast therefore in order to achieve the best printed label result it's important to select an optimum thermal transfer ribbon suitable for the label material, the application and for the thermal transfer label printer itself. Given that a typical manufactured product could be using any or all the label types listed below we also need to consider ribbons that can provide flexibility by offering high quality printing across a wide range of materials and applications.

For this reason Link Hamson has selected some key performance ribbons ideal for the electronics manufacturing industry:-

For versatility our **RHT40** is a clear winner and our most popular resin ribbon. It's suitable for use with all our polyimide, polyester and vinyl label materials and offers good performance on our standard paper label materials. Available to suit all the major thermal transfer printers such as SATO, Zebra, Datamax and TEC it's simply the most cost effective single ribbon solution for thermal transfer printing.

For maximum solvent resistance our **140** ribbon can be used with polyimide and polyester label materials for use through the PCB cleaning process even with high density barcodes.

For maximum durability our **181** ribbon combined with our high durability white or metallised polyester label materials offers an ultra high durable label solution for very harsh environments.

Applications	Materials	Durability and Cost			
		Low	Med	High	V. High
		Premium Wax	RHT40	140	181
PCB Serial, Barcode Label	Polyimide, Polyester	○	●	●	○
Component Label	Polyimide, Polyester	○	●	●	○
Rating Label	Polyester	○	●	●	●
Harsh Environment Label	High Durability Polyester	○	○	○	●
CSA Approval, UL/MIL also	Polyester	○	●	○	○
Tamper Evident Label	Vinyl	○	●	○	○
Cable Marking Label	Vinyl	○	●	○	○
Packing and Carton Label	Paper	●	●	○	○
Packing and Carton Label	Polypropylene	●	●	●	○

All our ribbons offer excellent print contrast against our thermal transfer label materials which makes them perfect for both standard barcode applications (e.g. Code39 or Code128) and also 2D barcodes (e.g. Data Matrix or Micro PDF417).