

# Thermal Transfer Ribbons – Application Guide

For any harsh environment or durable label application, both the print quality and resistance of the printed image when exposed to chemicals & abrasion is critical. In most cases the 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 very best printed label result it's important to select the optimal 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 (this is only a small selection of key ribbons):-

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 labels and offers good performance on our standard paper labels too. 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 in electronics and industrial manufacturing applications.

For maximum solvent resistance our 140 ribbon can be used with polyimide & polyester label materials for use with aggressive PCB cleaning processes even with high density barcodes.

For ultimate durability our 213 & 181 ribbons combined with our high durability white or metallised polyester labels offer ultra-high durable labels, suitable for harsh environments.

Applications	Materials	Durability and Cost			
		Low	Med	High	V. High
		Premium Wax	RHT40	140	181/213
PCB Serial, Barcode Label	Polyimide, Polyester	○	●	●	○
Component Label	Polyimide, Polyester	○	●	●	○
Rating Label	Polyester	○	●	●	○
Product Labels	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	○	●	●	○

Our ribbons offer excellent print contrast on our matching thermal transfer labels which makes them perfect for PCB barcode labelling, for standard barcodes (e.g. Code39 or Code128) and also 2D barcodes (e.g. Data Matrix, QR, Micro-QR or Micro PDF417).

They also provide crisp high-definition text when used with 600dpi printers for miniature pcb labelling down to 4x4mm.

**LINK  
HAMSON**

[www.linkhamson.com](http://www.linkhamson.com)

Tel: +44 (0)1494 439786

[sales@linkhamson.com](mailto:sales@linkhamson.com)

Link Hamson Ltd., 22A Kingfisher Court, Hambridge Road, Newbury, Berkshire RG14 5SJ