



Thermal Transfer Ribbon Which One To Use

	WAX	WAX / RESIN	RESIN
Overview	<ul style="list-style-type: none"> • First generation product • Simple Chemistry • Simple Technology 	<ul style="list-style-type: none"> • 2nd generation product • Hybrid product made up of any of the types of wax together with resins • Higher level of chemistry • More complex to manufacture 	<ul style="list-style-type: none"> • 3rd generation product • Full resin product • Highest level of chemistry • Very complex to manufacture
Types	Various blends of high performance natural, vegetable, and synthetic waxes such as Beeswax, Carnauba, and Petroleum waxes.	Wax/resin is a blended formulation and can be made up of synthetic/natural waxes and resins.	Resins are organic compounds (Hydrocarbons) and are found in the natural world as well as being synthesized for commercial purposes such as polish, paints and wood treatments.
Where to use	<ul style="list-style-type: none"> • Superior image • Rough papers • Recycled papers • Small and alpha numeric characters • Extremely wide latitude 	<ul style="list-style-type: none"> • Improved image durability • Mild solvent resistance • High calendered labels • Matt, semi-gloss & gloss coated • Polyethylene, polypropylene, polyesters, vinyl materials • Preprinted facestocks and UV varnishes 	<ul style="list-style-type: none"> • Superior image durability • Extreme solvent resistance • Gloss coated facestocks • Polyethylene, polypropylene, polyesters, vinyl materials, Kimdura® • Preprinted facestocks and UV varnishes
Advantages	<ul style="list-style-type: none"> • Industry standard • High print speeds • Low melt point • Works well on cheaper paper and facestocks • Product cost 	<ul style="list-style-type: none"> • Excellent latitude • Greater smudge and scratch resistance • Mild solvent resistance • Improved print image • Better heat resistance 	<ul style="list-style-type: none"> • Prints on synthetics • Scratch resistant • Extreme solvent resistance • Excellent Image qualities • Excellent heat resistance
Disadvantages	<ul style="list-style-type: none"> • Limited scratch and smear resistance • Does not adhere well on gloss coat or synthetic substrates (limited latitude) 	<ul style="list-style-type: none"> • Higher melt point • May not give good results on rough paper stocks • Higher product cost 	<ul style="list-style-type: none"> • High melt point causing accelerated printhead wear • Poor print latitude • High product cost • High label cost
	<p align="center">Wax ribbons work by absorption</p> <p>Printed Wax Image</p> <p>Wax is absorbed into substrate surface</p> <p>Paper Label Substrate</p>	<p align="center">Wax/Resin ribbons work by combination of absorption and bonding with the substrate</p> <p>Printed Wax/Resin Image</p> <p>The resin forms a bond with the surface of the label</p> <p>Gloss coat or synthetic label substrate</p>	<p align="center">Resin ribbons work by forming a chemical bond with the substrate</p> <p>Printed Wax/Resin Image</p> <p>The resin forms a bond with the surface of the label</p> <p>Synthetic label substrate</p>