DYNIC USA CORPORATION

The Dynic Thermal Transfer Ribbon Backcoat

The Myth

The myth is that thermal transfer ribbons, specifically the backcoat on thermal transfer ribbons, causes the deterioration and failure of the the thermal printer's printhead.

The Reality

Almost all thermal transfer ribbons produced today have backcoats that protect the thermal printhead, in some cases even extending the life of the printhead. Dynic makes such a printhead friendly backcoat.

What is a Backcoat?

The backcoating is applied to provide the correct frictional properties between the printhead and the ribbon. This reduces static and maintains consistent temperatures and heat transfer while printing. The backcoating also serves as a protective layer between the printhead and the base (PET) film.

What is a Backcoat Continued

In other words, the backcoating is a lubricating agent on the non-ink side of the ribbon that helps prevent wear or damage to the printer's printhead.

Why do Thermal Transfer Ribbons Need a Backcoat?

Printhead temperatures exceed 250 degrees Celsius, but that's the point at which most PET films begin to soften. The backcoat helps prevent the softening PET film from being left behind on the printhead and allows the ribbon to run through the printer smoothly.

What is Printhead Build-Up?

It's hardened deposits of backcoat components that build up on the film or glaze covering the printhead elements. This type of build-up is permanent and cannot be removed using cleaning pads or isopropyl alcohol wipes.

Dirty Printhead

What a Dirty Printhead Can Cause

What Causes Printhead Build-up?

Printhead build-up is a function of heat and the print coverage. In other words, higher print head energy may “cook” components of the backcoat onto the printhead. This phenomenon will get worse when combined with high printing speed and heavy print coverage.

The Stages of Printhead Build-up

The early stages of printhead build-up will result in the degradation of print quality. It may cause streaking or smudging because the hardened deposits on the printhead have a tendency to retain heat. They can also cause increased pressure between the printhead, the ribbon, and the receiving material. The late stages of printhead build-up will ultimately result in printhead element failure.

Dynic's Printhead Friendly Backcoat

The goal of Dynic's proprietary backcoat is to leave absolutely no build-up on the printhead. This is done by preventing the damaging effects of heat on the PET carrier film, reducing friction, and adding anti-static qualities to the backcoat formula.

Why are Anti-Static Properties Important?

Ribbons with high static charge are difficult for users to handle, load and unload in the printer. No one likes to get shocked. Shocks can also damage the printhead elements. Static also attracts dust particles that can cause print defects and can scratch the printhead. We've had customers tell us repeatedly that our S2® ribbon is the only ribbon they use at high speeds, because it does not cause static "sparks" like other ribbons.

Dynic's S2® Stellar Wax Ribbon

Dynic's S2® Stellar Wax ribbon can print at temperatures 20% lower than competitive brands. This reduction in printer temperature, as well as the special anti-static backcoating, help protect the printhead. It also allows S2 to be the only wax ribbon on the market capable of printing consistently scan-able bar codes at 12 IPS on most substrates.

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