



## **LOW TEMPERATURE BENEFITS:**

- \* Prevent dye migration*
- \* Prevent fabric shrinking*
- \* Prevent ghosting*
- \* Prevent scorching*
- \* Prevent color-changing*

# ***ELT SERIES HANDBOOK***

# ***THESE FABRICS REQUIRE ELT PROTECTION:***



## **FLUORESCENT T-SHIRTS**

- \*Ghosting**
- \*Scorching**
- \*Dye Migration**

Fluorescent tees, especially fluorescent yellow, have trouble with high heat. You may not notice until you compare to an unprinted tee, but the entire shirt may change color in the dryer.



## **PIGMENT-DYED & PASTEL TEES**

- \*Ghosting**
- \*Scorching**
- \*Dye Migration**

These softer tees scorch very easily and light colors are prone to ghosting. Dye migration exists on some of the darker shades. "Vintage" and stone-washed tees behave similarly.



### **POLYESTER & POLY/COTTON HOODIES**

- \*Shrinking**
- \*Dye Migration**
- \*Scorching**

High heat can shrink the length of a polyester hoodie over 4 inches. Dye migration is also a concern with any polyester or polyester blend. Certain colors will scorch easily in the dryer.



### **POLYPROPYLENE**

- \*Melting**
- \*Dye Migration**

Polypropylene may melt above 275°F. Keeping the temperature low is critical. Dye migration is also a concern. 210 denier nylon and polyester bags are also delicate and require low heat.

# ***THESE FABRICS REQUIRE ELT PROTECTION:***



## **SHADES OF GRAY POLYESTER**

- \*Ghosting**
- \*Shrinking**
- \*Dye Migration**

Gray polyester is extremely prone to ghosting. All 100% polyester fabric may experience shrinking under the flash cure unit as well as dye migration.



## **DARK SHADES OF POLYESTER**

- \*Dye migration**
- \*Ghosting**
- \*Shrinking**

Dye migration is the primary concern with red, royal, and black polyester. A low temperature ink with our low bleed technology can handle it. Ghosting and shrinking are also concerns.



### **STRETCHY FABRIC**

- \*Cracking**
- \*Shrinking**
- \*Dye Migration**

**Plastisol ink (like any ink) can only stretch so far before cracking. Stretchy polyester blends may also experience shrinking under the flash unit as well as dye migration.**



### **STRANGE BLENDS**

- \*Scorching**
- \*Color-changing**
- \*Dye migration**

**With many of the exotic blends you will need a quick flash time. The lower cure temperature will protect the fabric from changing color. Dye migration is a concern with polyester blends.**

# ***How will ELT revolutionize your shop?***

ELT stands for "Extreme Low Temperature" as it can fully cure as low as 250°F. This is an enormous benefit to you. Consider all of the known fabric problems which are heat-related. Every single one of these problems can be solved by screen printing with ELT Series inks.

**Ghosting   Dye Migration   Scorching   Shrinking   Color-Changing   Melting   Cracking**

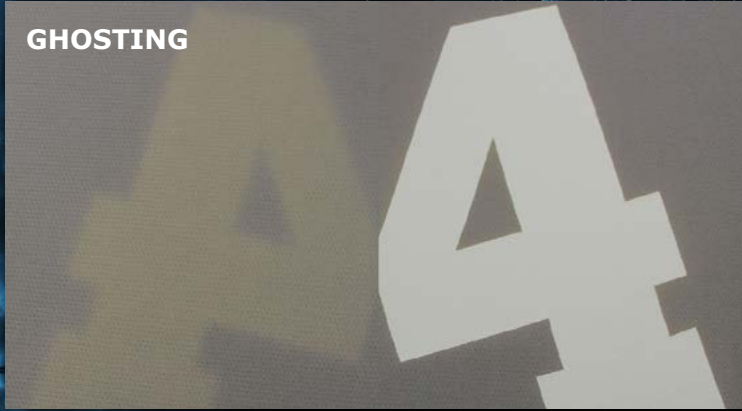
These are simply the fabric-related problems you have or will experience if you are not screen printing with ELT Series. This is just the beginning of the benefits you will experience as the low temperature effects much more than just the fabric. It effects the entire operation.

1. The fast flash cure time reduces platen heat, extending the life of platen adhesive.
2. No need for a cool-down station after the short flash cure time.
3. The entire production area will be cooler thanks to lower dryer temperature and less flashing.
4. Energy savings! Lower the temperature, lower your utility bills.
5. The amazing energy savings makes the ELT Series our most environmentally friendly ink.
6. Hot stacking temperature is reduced, lowering the risk of ghosting.
7. ELT is a universal ink for use on all fabrics. Stock only one ink in your shop.

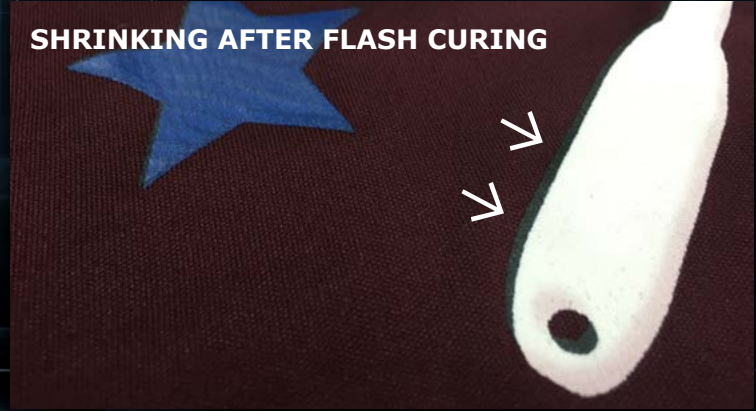
Our competition would like you to believe a low temperature alone will solve all of these problems. This is not the case. Chemistry matters. We manufacture ELT Series inks with a special formula to help avoid all of these fabric problems. The lower temperature assists the chemistry of the ink to prevent problems such as ghosting and dye migration.

# ***Here is what these problems may look like:***

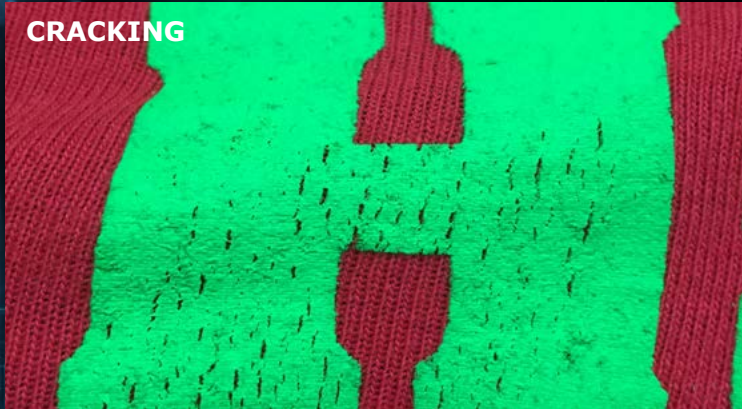
**GHOSTING**



**SHRINKING AFTER FLASH CURING**



**CRACKING**



**DYE MIGRATION**



# ***You can screen print sublimated polyester.***



## **ELT DIGITAL BLACK UNDERBASE**

- \*High tech ink stops dye migration**
- \*Flash cures unbelievably fast**
- \*ELT White and colors will cover the black**

**A black underbase may sound strange but it is the only option for stopping dye migration on sublimated polyester such as digital camo and striped uniforms.**



## **BEST PRINTING INSTRUCTIONS**

- \*86 to 110 count screen mesh**
- \*Print-flash-print for best bleed blocking**
- \*Print-flash-print top color for best opacity**

**These are simply the best recommendations. We have numerous customers printing one layer of Digital Black and one layer of the top color with great results. Test your fabric!**

# ***What you need to know about ghosting:***

Ghosting is an incredibly difficult problem to predict unless you are really paying attention. The most common offenders are listed earlier in the booklet. This does not mean every gray or pastel fabric will ghost. However, you would be wise to assume they will. Protect your fabric!

When does ghosting happen? It can happen while in the dryer or immediately after it leaves the dryer. The common denominator...heat. Printing with the wrong ink and then hot stacking tees onto a big pile of other hot tees is the perfect storm. These piles stay hot for a very long time, leaving the print to touch the back of the next tee. Do you want a bigger problem? Allow the tees to fall into a box at the end of the dryer. Best practice is to catch the tees at the end of the dryer belt and create multiple piles. This way, they are far cooler when they finally are stacked.

Ghosting is seen primarily with white prints. White ink contains many additives not found in colors such as scarlet, gold, or royal. We formulated ELT White specifically to combat ghosting. ELT White is without a doubt the safest plastisol ink you can screen print onto fabrics which may ghost. Since ghosting is a fabric issue, we can never guarantee an ink will not ghost. We don't know what will be manufactured next season (or even tomorrow). However, we assure you this is the safest ink regardless of the new fabrics hitting the shelves.

ELT-S White is a super-stretchy, soft version of ELT White. It was designed to look and feel like silicone ink. Due to its softness, there are additives to enhance opacity and bleed resistance over the regular ELT White. For this reason, ghosting is possible on a very small percentage of delicate fabrics. When in doubt, ELT White is the safest ink to combat ghosting.

# Questions & Answers

**Q: What is the difference between ELT Series and ELT-S Series?**

**A: ELT-S Series inks were designed to stretch and produce a silicone ink feel. ELT-S colors will have a somewhat glossy appearance while ELT has a matte finish. ELT colors will cover dark fabrics better than ELT-S. However, ELT-S White is more bleed resistant compared to ELT White. Both ink series are fantastic choices!**

**Q: Why does the tech sheet list different ink temperatures for different fabrics?**

**A: ELT will cure as low as 250°F. However, we recommend curing ELT inks at 270°F on most fabrics as the ink will have a softer feel and better stretch. You can cure ELT hotter, however you will lose many of the low temperature benefits.**

**Q: Can I print other high temperature inks with ELT?**

**A: Yes. However, you will be required to cure at the higher temperature. This will not harm the ink. This will harm it's bleed resistance on polyester and polyester blends.**

**Q: Can I print other high temperature inks on top of ELT Digital Black Underbase?**

**A: All inks will adhere to the ELT Digital Black Underbase. However, you will want to print with bleed resistant inks if you want to stop dye migration. ELT Digital Black Underbase stops much of the dye migration but not all of it. The inks printed on top must have excellent bleed resistance as well.**

**Q: Can I print ELT Digital Black Underbase on non-sublimated polyester?**

**A: Absolutely! This is a great way to ensure zero dye migration. Protect your fabric!**

**Q: Why not use silicone ink?**

**A:** Plastisol ink is far more user friendly, less expensive, and does not have a limited shelf-life. ELT-S Series was formulated to have all of the silicone ink positives without the long list of negatives. Silicone ink performs very poorly when printed onto fuzzy fabrics. Also, it is not recommended for use on automatic presses. In short, its uses are limited and it is not user friendly.

**Q: Is there an ELT Series mixing system?**

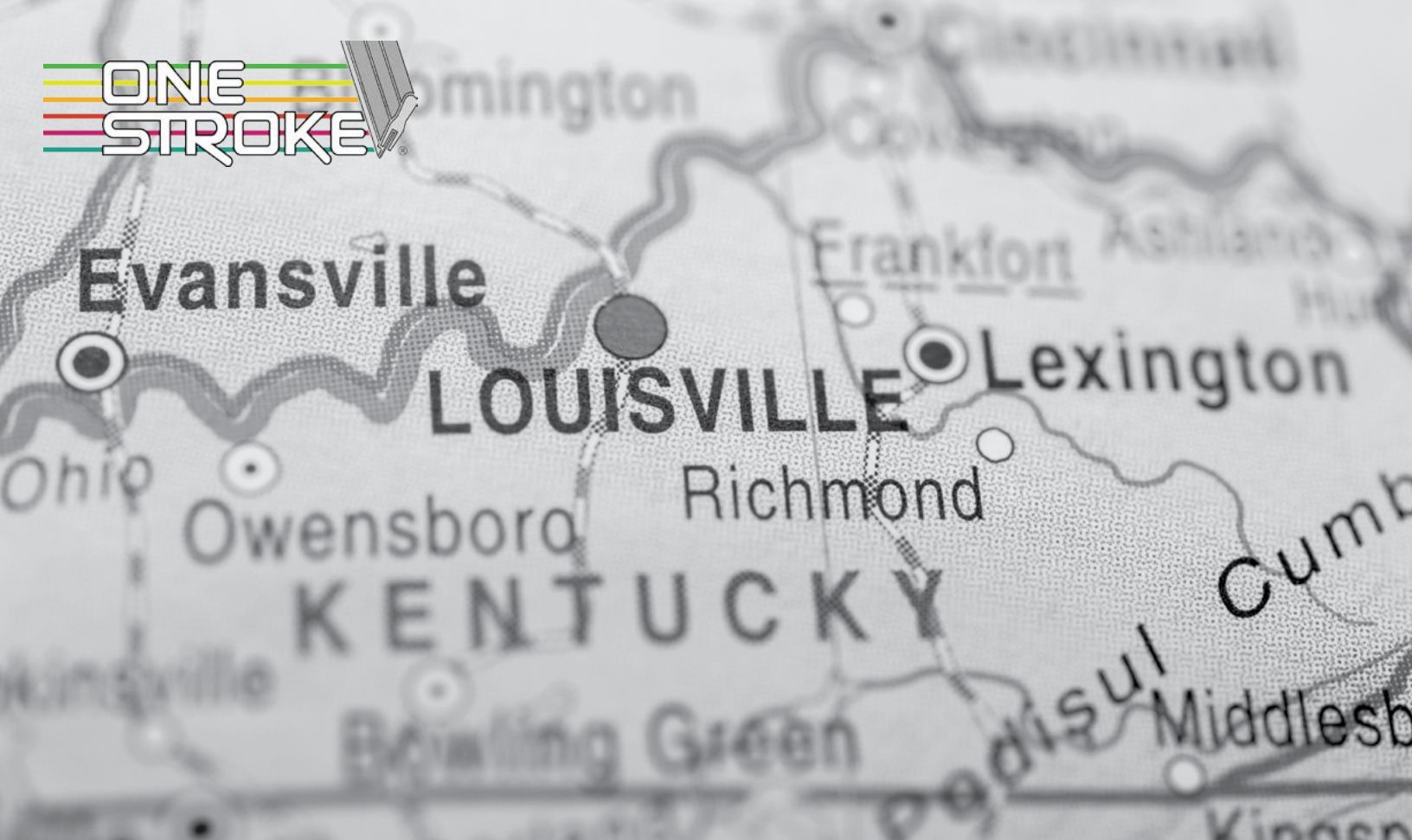
**A:** We have four! We have the ELT MM System which is ink-to-ink. We also offer an ELT Pigment Mixing System for a pigment-to-base experience. We also manufacture both of those systems in the ELT-S formulation for better stretch and softness. Formulas are always found on our website allowing regular updates. Color accuracy matters!

**Q: Do I need nylon catalyst when printing 100% nylon?**

**A:** Only if the nylon is waterproof or water resistant. Drip some water on the fabric and give it 30 seconds to sink in. If the water beads up and does not sink in, add 10% catalyst to your ELT ink.

**Q: How do I know if a fabric is going to ghost?**

**A:** Test! Print and cure one item. Examine it after it has cooled off completely. Turn it inside out and see if the fabric is discolored on the inside of the print. If so, this is clearly a fabric which may ghost when hot stacked. You can also fold this print over with the print face down onto the fabric, and then heat press it. Try 270°F for 20 seconds, medium pressure. Allow the fabric to completely cool. Unfold the fabric and check for fabric damage (ghosting) where the print was touching.



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