

# 5 CONTRIBUTING FACTORS FOR GHOSTING



Ghost images on garments are rare, but very costly. In order for ghosting to occur, these 5 factors must co-exist.

**1. The Dye** – Certain dyes must be present in the shirt. Though there are many suspect dyes, the most prevalent troublemaker is an azo reactive dye, Procion™ Yellow. This dye adversely reacts to certain bleed-resistant ingredients contained in most of the popular bleed-resistant lines of inks.

**2. The Ink** – It must be an ink that contains a non-peroxide, bleed-resistant agent. The majority of today's most popular bleed-resistant plastisol inks use a bleed-resistant technology which is odorless and the bleed resistance is superior to the peroxide predecessors.

**3. Heat** – Excessive heat will create a situation which the garment will retain the heat for a longer period of time.

**4. Pressure** - This part of the equation is usually caused by over stacking hot garments at the oven or packing them immediately into boxes. The weight of several dozen shirts creates enormous pressure. Couple this with the residual heat in the material and a situation is created that mimics a transfer press. The

layers of fabric will isolate the heat in the stack for long periods of time, which prolongs the exposure of the dyes to the ink.

**5. Humidity** – This seems to be the main trigger for the ghosting problem. The presence of moisture in the garment will start the dye degradation process. Even if all the other factors are in place, the chances of experiencing ghosting are drastically diminished if no humidity is present.

Certain things cannot be controlled by the printer:

- The dye in the shirt
- The humidity in the air and shirt

Things that can be controlled are:

- The type of ink – cotton white for cotton, non-ghosting bleed resistant for polyester
- The amount of heat used on the garment—cure at the recommended temp, not over
- Stack in separate piles to allow cooling—fold in dozens separately, wait to pack

Be aware of at-risk colors; brown, tan and beige are the most sensitive to possible ghosting.

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