DYE MIGRATION

WHAT IS IT?

Dye migration occurs when dyes form a substrate bleed or move into the ink layer after printing, causing color shifts, particularly in light or white inks. This issue is more apparent when curing at temperatures over 290°F on polyblends and polyester material.

WHY IT HAPPENS

Dye migration typically occurs under the following conditions:

- When high heat is applied
- When the dyes in the fabric are not fully set or are sublimination-based
- When the ink layer is not properly formulated to block or resist dye movement
- When the ink deposit is too thin or printed with too high of pressure depositing the ink “into” the fabric instead of “onto” the fabric
- When garments are “hot stacked” or placed in boxes while the substrate is warm

AVIENT SOLUTIONS

Avient offers advanced ink formulations to help prevent dye migration and maintain print integrity. Our Wilflex™ Inks provide effective solutions for both standard and flexible cure printing:

- **Wilflex™ Epic UBG**
  Cure temperature 320°F (160°C)
- **Wilflex™ Rival Sport LC Defender**
  Cure temperature 250°–300°F (121°–149°C)

HOW IT WORKS

Both Epic UBG and Defender create a chemical and physical barrier between the fabric and the top ink layers, preventing dyes from migrating upward. This helps ensure that your prints remain vibrant, crisp, and true to color.

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