**ColorMatrix™ Fiber Colorant Solutions**

**Liquid melt-injection color for polyester fiber**

**PRODUCT DESCRIPTION**

ColorMatrix™ Fiber Colorant Solutions combine advanced liquid color formulations with state-of-the-art, high-pressure metering equipment to enable late-stage injection of liquid color in polyester melt extrusion spin coloring processes.

**VALUE SOLUTION**

Traditional aqueous dyeing offers excellent production flexibility for polyester fiber manufacturers but the process is water-intensive, and secondary water treatment processes add time and cost. This technology eliminates the need for water and additional energy and chemicals during coloration to provide a more cost-effective and sustainable solution.

Late injection just before the spinneret means there is no color contamination in the extruder. Colors can be changed quickly, with significantly less change over time compared to adding color earlier in the extrusion process. Efficient changeovers help reduce waste and make low volume and custom colors possible.

**KEY CHARACTERISTICS**

- Several injection points can be added to enable multiple color production at the same time on a single extruder
- Flexibility to manufacture as little as 50kg or tons of fiber using the same simple process
- No extruder contamination and easy color-on, color-off operation increases color change speed
- Rapid color changes, precise metering and the ability to adjust color in-line reduces waste during color changeovers
- ColorMatrix™ offers a dedicated color design service to help shorten product development cycles and enhance market agility
USES AND APPLICATIONS

Apparel
Sports clothing, everyday fashion, footwear and accessories

Automotive
Seat belts and upholstery

Home furnishings
Linen, furniture and curtains

TECHNOLOGY COMPONENTS

- A broad palette of liquid colorants (40%-80% pigment or dye loading)
- Proprietary high-pressure metering equipment that enables precise, accurate color addition
- An in-line melt mixer (variable speed)

Liquid color processing
Formulations are stable at temperatures up to 60°C and retain good flow properties at temperatures as low as 10°C. These formulations can help lower yarn friction and abrasion, compared with solid colorants, and there is no fuming or evaporation during production.

In-line IV adjustment
Specialty additives are available to adjust Intrinsic Viscosity (IV) in-line for rPET applications. These additives are available as single products, or can be combined with color to create a multi-functional formulation.