



Technical Communication

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「Dyeing of Nylon/Polyurethane blended fabrics」

- Nylon blended fabrics are becoming more popular and are commonly blended with spandex for stretch properties in applications such as swimwear or sportswear.
- One of the common issues encountered for nylon/spandex blends is the luster or shine of the fabric after dyeing, especially in deep shades. Sometimes, the undyed polyurethane appears as streaks on the fabric.
- The common cause of luster of dyed dark shade nylon fabrics is the undyed polyurethane. Acid Black RL is commonly used to dye Nylon, but it does not dye polyurethane well.
- Nippon Kayaku's Kayakalan Black BGL can be recommended as an alternative to commonly used Acid Black when dyeing Nylon/Polyurethane blended fabrics to reduce this problem.

Fabric is Nylon/Cotton/Polyurethane (61/20/19)	
 <p>Dyed with Acid Black RL</p>	<p>Nylon side is dyed with Acid Black RL at 110°C for 30 minutes.</p> <p>Cotton side was dyed with reactive dyes.</p> <p>The polyurethane within the fabric has been purposely extracted to reveal the undyed polyurethane (indicated by orange arrow).</p> <p>The polyurethane appears greyish white, which is the cause of the luster of the fabric.</p>
 <p>Dyed with Kayakalan Black BGL</p>	<p>Nylon side is dyed with Kayakalan Black BGL at 110°C for 30 minutes.</p> <p>Cotton side was dyed with reactive dyes.</p> <p>The polyurethane within the fabric has been purposely extracted to reveal the undyed polyurethane (indicated by orange arrow).</p> <p>The polyurethane appears black, which removed the luster of the fabric.</p>