

Performance Twill®: A Case Study

100% cotton sheets are generally regarded as providing the greatest comfort and absorbency. Nevertheless, durability of sheets is also an important consideration, especially for commercial applications in which sheets are subjected to high temperatures and harsh chemicals during laundering and ironing. The life cycle of a 100% cotton sheet is approximately 50 to 60 industrial launderings and ironings. Given many clients require sheets to be changed daily (e.g. healthcare, cruise ships, hotels, resorts) the replacement cost of sheets can bear a significant expense. One solution has been to replace cotton fiber with polyester fiber in sheeting fabric. While the use of polyester fiber significantly increases durability, the comfort level in terms of hand and absorbency suffers. There remains a need in the industry for a sheeting fabric having the comfort of cotton fiber and the strength/durability of polyester fiber. Equally important, there is a need for a balanced sheeting fabric having a relatively high tensile strength in both the Warp and Fill directions.

PROJECT DURATION (INCEPTION TO RECEIVING PATENT):	4 years (2 years R&D, 2 years patent filing)
TEAM:	USA: A full-time team comprised of three textile engineers. India: A full-time R&D team comprised of ten textile scientists.
NET INVESTMENT:	\$250,000
COUNTRY OF DEVELOPMENT:	India: textile infrastructure and expertise, raw material proximity China: raw material proximity
TOTAL VARIATIONS BEFORE FINAL PRODUCT:	12
CUSTOMER TEST:	5 months (Wash Test and Hand/Feel Test)

Our solution to this challenge is our Performance Twill® sheet with patented construction. Feels like cotton and lasts like polyester. Luxuriously soft but can handle the high temperatures and harsh chemicals of commercial laundries

Performance Twill® has been independently tested by SGS Labs for up to 200 industrial launderings (4x longer than the average 100% cotton sheet) and has been successfully commercialized in our target markets for the comfort/feel of 100% cotton. We are happy to provide customer references upon request.