

## Hex-Tex: Laser Cutting Nonwoven Fabrics

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Hex-Tex is a laser-cut nonwoven dress that explores the use of nonwovens in the apparel industry. Nonwoven fabrics eliminate the yarn stage in creating fabrics from fibers, thus it is an energy and cost efficient medium for apparel design.

Nonwoven fabrics are fabrics made directly from fibers. The nonwoven fabric used in this dress is a melt-blown polyester/nylon blend, meaning as this blend of thermoplastic polymers were extruded, a stream of air made the fibers thinner as they were blown randomly onto a platform to create a fiberweb, Thus creating a soft fabric with thermoplastic properties. Laser-cutting involves burning vector lines into a given medium. Because our medium is thermoplastic, the laser-cutting process provided a reinforced edge on each cut-out, strengthening the nonwoven fabric despite its loss of substance.

Hex-Tex utilized both of these technologies to exhibit them on a shift dress. Patterns of the dress were hand-drafted then scanned into the computer and vectorized to be edited in Adobe Illustrator. In this program, hexagons were

inlaid into each pattern for the cut-out effect. The dress did not require any serged seams, as another advantage of nonwoven fabrics is their inability to fray.