

## Industrial Applications

### Cutting Tables

Porex applies its razor-sharp materials and production technologies to the development of a porous surface for industrial cutting table that meets all of the manufacturer's design goals.



### Design Challenge

Manufacturers of cutting tables sell products to the automotive, textile and specialty composite materials markets. The tables are used to cut massive quantities of patterns from fabric and textile roll stock for the production of furniture, automotive upholstery and clothing. Advances in the industry led to the development of vacuum-based cutting tables, which rely on a vacuum to pull the fabric or textile flat onto the table for computer-based cutting. Porex was asked to develop a porous cutting surface through which the vacuum could be drawn. Key requirements included optimized backpressure and a surface hard enough to withstand repeated scoring from a cutting instrument--typically a mechanical razor driven and controlled by CAD/CAM software.

### Solution

The initial analysis performed by Porex engineers focused on identifying a polymer source that offered a unique balance of material/surface hardness capable of withstanding repeated cuts by the mechanical razor. Backpressure requirements and a sheet format measuring 40 inches by 76 inches also guided the design. The engineers selected a polypropylene material featuring a high Rockwell hardness with an open pore structure that minimized vacuum losses through low backpressures. Porex's continuous sheet production technology provided a large sheet format to bring the design goals together in a finished product

### Results

The Porex porous plastics solution satisfied each of the design goals established by the cutting table manufacturer. Primary reasons for the success of the project included Porex's material knowledge and comprehensive production capabilities. Today, Porex continues to supply this innovative product to cutting machine manufacturers around the globe.

*By combining ideas, know-how and proven results with the highest standard of innovation and excellence, POREX Porous Media provides unique solutions for various applications.*



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