

CUSTOMER SUCCESS STORY



**At BASF, we don't make
the Knoll Chadwick chair.
We make it stronger.**

Customer: Knoll, Inc., East Greenville, Pa.
Mack Molding, Arlington, Va. (molder)
End-Use: Chadwick office chair
Product: Ultramid® SEG8 nylon 6 grade

CHALLENGE: The Chadwick chair by Knoll, Inc., has attracted a lot of attention in the office furniture market for its easy, smart and comfortable design at an affordable price. Named after renowned designer Don Chadwick, the Chadwick office chair features simplified, easy-to-reach mechanisms to achieve “just right” adjustments for individual preferences, including the controls for seat height, tension, tilt stop, arms and lumbar support. In order to accommodate the complicated geometry and unique design, the chair's designers required a material that contributed to the chair's aesthetics and that was durable.

SOLUTION: Knoll selected BASF's Ultramid SEG8 nylon 6 grade for this innovative hybrid seating design. “BASF was able to supply us with the right material formula for the Chadwick,” said Bob Melhuish, Senior Product Development Engineer for Knoll. “Ultramid SEG8 nylon is an excellent match for our material and structural requirements, providing the strength, structure and performance we need. BASF's technical team also supported us throughout the design process, from nonlinear analyses of the chair arms to design of experiments on the prototype gas-assist tools. All our needs were satisfied.” Mack Molding utilizes gas-assist injection molding technology to run the Ultramid SEG8 nylon resin at highly efficient rates.

BENEFITS:

- The 40-percent-glass-reinforced Ultramid SEG8 nylon 6 grade delivers “Class A” surface without the need for paint or secondary operations, and achieves a surface appearance that rivals materials with a smaller percentage of glass fill.
- The higher percentage of glass coupled with nylon's inherent toughness enables Ultramid SEG8 nylon 6 to be better suited than comparable materials to meet Knoll's rigorous durability and fatigue strength requirements.
- Ultramid SEG8 nylon 6 is easier to process than comparable nylons, achieving cycle time reductions of up to 40 percent and higher flow rates by 80 percent, which help to lower production costs.
- Through this material solution, Knoll is able to produce a chair that uses technologies such as integral coloring on plastic components and virtually zero volatile organic compound paints.
- The BASF nylon supports the chair being designed for durability and ease of disassembly so that parts can be easily removed and replaced with minimal waste.
- The Chadwick chair provides solutions that contribute to earning Leadership in Energy and Environmental Design (LEED®) credits, is GREENGUARD™ certified and uses raw materials with a recycled content of 41 percent.

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