

# Wears Less, Lives Longer

By Michael Norton

Extending the life and appearance of carpet with polyurethane cushion

**C**rushing and matting by foot traffic can make an office carpet "ugly out" long before its actual fibers begin to break down. Why? Because in daily use, carpet fibers serve the dual function of providing aesthetics and absorbing the energy from walking and rolling traffic.

either installed under carpet or attached to the carpet backing, in their carpet specifications. Polyurethane cushion helps prolong carpet's appearance retention by acting as a shock absorber that reduces the force of impact, and thus the matting effect, of foot and wheeled traffic. Cushion's ability to keep the carpet looking better, longer can contribute to significant savings in life-cycle costs, often more than repaying the added initial investment in cushion.

A carpet may last as much as 50-percent longer when supported by polyurethane cushion, according to floorcovering industry research. A variety of performance tests are used to measure wear on cushioned and uncushioned carpet. The Roll Stool Test simulates the wear and tear from casters chairs, such as those found behind every desk. In another category, the Hexapod Drum test and the Vetterman Drum Test simulate aggressive walking. During testing, carpet is rated for appearance change according to standardized systems.

The Carpet Cushion Council conducted tests on commercial and residential carpet, using the numerical system developed by the International Organization for Standards (ISO) for carpet certification in Europe. After 12,000 hexapod test cycles, the use of polyurethane cushion under a typical 36-ounce cut-pile nylon carpet gave better results, on average, by one full ISO appearance unit. In a similar study by a

major supplier to the carpet industry, a typical loop-construction contract carpet was shown to have a two-fold improvement in appearance rating when an appropriate polyurethane cushion was used. The bottom line: Many studies have been conducted, each with a common result. Polyurethane cushion extends carpet life through improved appearance retention.

Getting the most performance out of carpet installed over polyurethane cushion depends on specification of the appropriate cushion for the application. Prime polyurethane foam is produced by slicing layers from a block of polyurethane foam. Recycled and recyclable, bonded polyurethane foam, or "rebond," is cut from a fused log or block of chopped pieces of recycled and/or manufactured foam.

Carpet and cushion specification should be an informed decision. (See below for available resources.) Equally important is the quality of the installation. From sub-floor preparation to the chosen method of installation, proper installation is key to the performance and longevity of your carpet. Be sure to work with a reputable floorcovering contractor whose installers are experienced with carpet cushion and, preferably, certified.

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\*Key to Overall Appearance/Wear Rating:  
5 - Negligible change, 4 - Slight change, 3 - Moderate change,  
2 - Considerable change, 1 - Severe change

Fibers deform under the footstep, and over time deformation becomes permanent. Although the fibers are still intact, once carpet loses its attractive appearance, most people choose to rip it out and start all over again.

Facilities decision-makers may significantly reduce replacement costs over time by including polyurethane foam cushion,

## Do It Right: Specify Polyurethane Carpet Cushion

Facilities managers who want to help reduce the frequency of carpet replacement by installing commercial polyurethane carpet cushion must be sure to specify the appropriate grade of cushion for the application and the proper installation requirements. For answers to your questions and detailed guidelines for specifying carpet cushion for the workplace, the Alliance for Flexible Polyurethane Foam (AFPF), 1-800-696-AFPF, offers an "Ask the Experts" service on its website ([www.afpf.com](http://www.afpf.com)) or e-mail ([info@afpf.com](mailto:info@afpf.com)). For general

information on cushion and carpet, visit the Carpet Cushion Council ([www.carpetcushion.org](http://www.carpetcushion.org)) and the Carpet and Rug Institute ([www.carpet-rug.com](http://www.carpet-rug.com)) on the Internet.

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