

# CARPET CUSHION: GOOD ERGONOMIC NEWS

Facilities managers looking to address ergonomic concerns should know that one answer is, literally, underfoot: carpet cushion. The addition of flexible polyurethane foam cushion not only extends a carpet's life, it enhances the comfort of those walking on it. Furthermore, a growing body of research suggests that the use of carpet cushion in a workspace can have a positive impact on employees, resulting in less fatigue, better balance, and the potential for reduced injury, especially in those environments where workers spend a considerable amount of time on their feet.

The installation of carpet cushion is an easy, effective way to help fit the work environment to the worker, rather than the other way around. Cushioning softens the impact of walking across an office, whether it's from a cubicle to the water cooler or a stroll down the corridors of power. According to a study on the influence of floor type on fatigue, balance, and other circumstances by Dr. Mark Redfern, Associate Professor at the University of Pittsburgh, published in the September 2000 issue of the *American Industrial Hygiene Association Journal*, "flooring significantly affects workers' perceived tiredness and discomfort in various parts of the body...Softer floors result in reduced discomfort as compared with a hard floor, particularly for the lower extremities and the lower back." Additional factors such as the aging workforce, changing social expectations about work, and rising medical costs also underscore the need for attention to such matters.

Ergonomic programs have consistently been shown to demonstrate improvement in both worker safety and productivity. Companies are increasingly aware of savings that can be gained from protecting employees from preventable injuries and ailments, savings that make themselves evident both functionally and fiscally, and these concerns are being taken into account by attentive facility managers.

## Beyond Comfort...Productivity

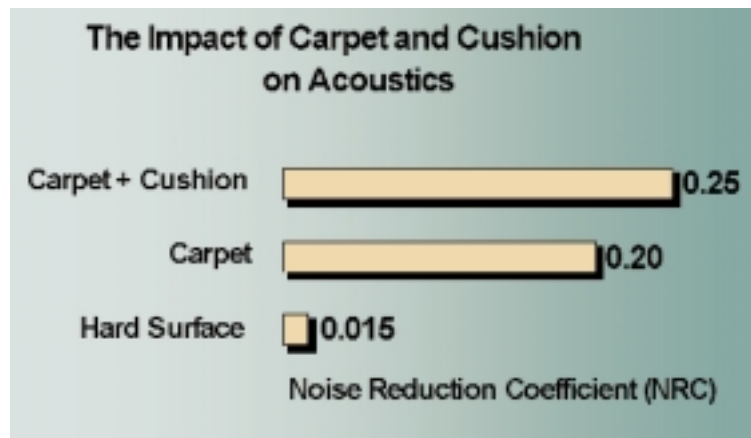
In a 1998 survey conducted by the American Society of Interior Designers of 200 business decision-makers (100 from fast-growing small and mid-size companies and 100 from the largest 1000 U.S. companies), 90 percent said that improved office design could improve productivity in their respective organizations. Increased employee comfort was identified as one of the most notable areas in which workplace design has a direct impact on productivity.

In addition to the physical benefits exhibited by carpet cushion's increased impact absorption, it is also an effective way to reduce office noise. This is especially

ability of floor covering to absorb sound showed that a polyurethane cushion-backed carpet performed with a Noise Reduction Coefficient (NRC) of 0.25, as compared with 0.20 for a conventional, synthetic-backed carpet and 0.015 for bare concrete (see chart).

"There's a growing understanding of the need to pay attention to ergonomic factors beyond the most obvious ones," says Michael Norton, principal, Norton Performance Consulting. "There's no doubt that putting the right cushion under contract carpet means more comfort underfoot, which translates into less fatigue. And, less fatigue translates into more energy and greater productivity."

A good rule of thumb is that one minute per day in the workplace translates into roughly \$100 per year, according to ergonomic consultant and author Dan MacLeod, CPE. "So five minutes of lost time per day due to fatigue costs a company \$500 per year," he says. "When multiplied across an entire workforce, you don't need a calculator to see the economic justification that supports the ergonomic upgrade to carpet cushion."



appropriate in offices with open plan environments featuring computer cubicles and/or modular workstations. Employees in such settings are often able to hear—whether they choose to or not—their co-workers' computers, telephones, and conversations. This is more than just standard office ambiance; it is a distracting intrusion that can impair concentration and productivity. As offices get louder, acoustical considerations are emerging as a major ergonomic issue. Carpet helps absorb noise, and cushioned carpet has been shown to offer significantly more noise reduction than hard-surface flooring or carpet alone in laboratory tests.

Information compiled by the Carpet and Rug Institute (CRI) further indicates that the addition of carpet cushion in the workplace influences the acoustical properties of a flooring system. Data generated rating the

The ergonomic advantages of cushion installation go hand in hand with established long-term benefits of carpet cushion such as carpet life-cycle extension and appearance retention without added long-term cost. The multi-leveled value received over the life of cushion installation is a compelling basis for the one-time purchasing decision. The rewards of carpet cushion accrue year after year, enhancing return-on-investment and employee satisfaction. □

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