

# Maintenance Breakthrough

Polyurethane Cushion Improves Vacuumability of Commercial Carpet



**Alliance for Flexible Polyurethane Foam**

A recent study of soil removal has demonstrated that commercial carpet and commercial polyurethane carpet cushion, properly installed by stretch-in or double-glue methods, shows as much as a 40% to 60% or greater improvement in test results compared to the same style of carpet installed without cushion.

A clean, well-maintained carpet looks better, is likely to last longer, and helps to control life cycle costs. Appearance retention is the key to carpet longevity in commercial installations. The research results on improved vacuumability provide additional evidence that cushion can play an important role in extending a carpet's lifetime of attractive appearance, and reduce the frequency of costly refurbishing and replacement.

More effective maintenance and enhanced appearance retention are only two of the many benefits carpet cushion brings to commercial installations.

"Cushioning makes vacuuming more effective. You can press down in one area and the yarn will open up slightly in the adjacent area. Soil tends to be gritty, and grit grounds into carpet. This is what causes the loss of luster."

*Howard Elder, Director of Research and Environmental Affairs, J&J and Chairman, Carpet & Rug Institute, Value Added Committee*



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# Commercial Carpet: Appearance Retention Comes First

When it comes to specifying carpet, lifetime performance is the single most important consideration. Carpet's aesthetics and design are highly valuable, but only as long as they are maintained throughout the carpet's life cycle.

Dirt that remains in the carpet can be highly abrasive to carpet fibers. Dirt and grit rubbing against the fibers abrade the fiber surfaces and dull a carpet's luster. To minimize this aspect of "uglying out," the key is to specify cushion that helps make carpet easy to maintain with effective vacuuming, and keep up a comprehensive maintenance program.

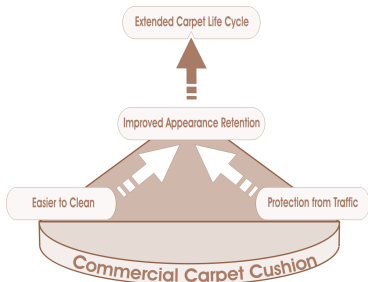
A commercial carpet, when tested with a commercial bonded polyurethane cushion installed by stretch-in or double-glue methods, proved easier to clean in the vacuum test, and demonstrated a 40% to 60% or greater improvement compared to the same carpet installed without cushion.

## Testing for Vacuumability

The test to evaluate the impact of carpet cushion on soil removal is conducted under highly controlled conditions. A specified amount of a special blend of oily and non-oily soils is applied and worked into the pre-conditioned carpet. After precise weighing of the carpet and the vacuum cleaner bag, the carpet is installed on a belt, where it is cycled back and forth four times under a high-performance commercial vacuum cleaner. Following vacuuming, the carpet and the vacuum bag are reweighed, and the percent soil removal is calculated.

The test method, originally designed for vacuum cleaner certification, evaluated soil removal efficiency on a commonly specified commercial carpet. Representing perhaps the most popular single construction manufactured for the commercial marketplace, the 26 oz. nylon loop construction carpet used in this study provides an outstanding example for the vacuuming test. Carpet without cushion was installed to simulate the direct-glue method, while the carpet over cushion was installed using two common installation methods: stretch-in and double-glue.

In the first test, carpet over cushion was installed in a manner simulating a stretch-in installation. When tested with a commonly used commercial bonded polyurethane cushion installed, the results showed a 60% or greater improvement



## More Reasons To Choose Carpet Cushion

### Cushion Features

Improves Carpet Appearance Retention

Improves Acoustics

Better Ergonomics More Comfort

Thermal Insulation

Easier to Clean

Recycled Content By Definition & Recyclable In Many Locations

### Cushion Benefits

Reduces Life Cycle Cost

Less Noise Distraction Improves Productivity

Reduces Fatigue Raises Worker Satisfaction

Environmental Comfort Reduces Costs

Carpet Looks Better Longer

Consistent with Goal of Increased Recycling

compared to the same style of carpet installed without cushion. In every case in this segment of the study, the test carpet installed over cushion yielded improvements compared to the uncushioned carpet installation.

A similar test was conducted using the same 26 oz. nylon loop carpet and the same commercial cushions, but installed via the double-glue method. The commercial bonded polyurethane cushion produced better results than the direct-glue comparison, yielding an improvement of more than 40% versus the same style of carpet installed without cushion.

Once again, in every case in this segment of the study, carpet installed over cushion showed an improvement in vacuumability over carpet installed without cushion.

While other carpet styles may show different results, the improvements quantified in this study appear to be generally consistent with experience in the industry.

## Polyurethane Carpet Cushion Improves Your Bottom Line

Recent studies have demonstrated improved vacuumability when using cushion under a commercial carpet, keeping the carpet easier to clean effectively. Cushioning also helps protect the carpet face from crushing and matting during years of foot traffic. Appearance retention and less frequent replacement offer a tangible return on your investment in cushion.

*Independent testing was conducted at Professional Testing in Dalton, Ga. Several different commercial carpet cushions were tested. For complete details, contact the co-sponsoring organizations: The Alliance for Flexible Polyurethane Foam and the Carpet Cushion Council.*

### Carpet Cushion Resources

Alliance for Flexible Polyurethane Foam (AFPF)  
800-696-AFPF (2373)  
[info@afpf.com](mailto:info@afpf.com)  
[www.afpf.com](http://www.afpf.com)

Carpet Cushion Council (CCC)  
203-637-1312  
[carpetcushion@msn.com](mailto:carpetcushion@msn.com)  
[www.carpetcushion.org](http://www.carpetcushion.org)

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