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### Selecting and Maintaining Carpet in Hospitals and Schools

Floor coverings for healthcare and educational facilities offer unique challenges to facility managers and school administrators, especially when it comes to choosing carpeting. These are demanding environments, and not all carpet types are up to the task. Additionally, along with being durable, the carpet selected must be relatively easy to clean and maintain, enhance safety, incorporate style and design elements that are attractive yet practical, and be protective of the indoor environment.



*Structured-back carpets with durable nylon wear surfaces can last 10 or even up to 25 years, depending on the quality of the carpet, foot traffic, and maintenance.*

Further, carpet may not be the best option in certain areas of these facilities. For instance, in a hospital, the ambulatory area, trauma unit, birthing unit, children's ward, kitchens, and restrooms may be better served with vinyl flooring. Similarly,

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carpeting is not always the best choice in school foodservice areas, athletic areas, restrooms and locker rooms, or art and handicraft classrooms.

However, both types of facilities do provide ample opportunities for the use of carpet, and carpeting offers benefits that traditional hard flooring does not. For example, carpet in both schools and hospitals is often much more inviting, and it definitely can help quiet these facilities, a common concern. Additionally, carpet can help reduce slips, trips, and falls, and because it acts like a sponge, it is able to absorb airborne particulates and contaminants, which can help improve indoor air quality.

But to take advantage of these benefits, proper carpet selection is critical. Here are some suggestions that can make the selection process a bit easier and help facility managers and school administrators decide on the right carpet for their facilities.

### Hospitals

Several issues should be considered when selecting carpets for healthcare and hospital facilities. In most cases, a densely tufted, solution-dyed, nylon fiber carpet will provide excellent resilience, performance, and appearance retention. These carpets tend to be more resistant to stains and spills. And, they are less likely to fade, even in areas exposed to bleach-based cleaners and sanitizers.

Facility managers are encouraged to examine the structure of the carpet's backing. Conventional broadloom carpets, similar to those often found in homes and office environments, are porous. Spills can seep into and through the backing structure and, in some cases, become a reservoir for bacteria, germs, fungi, mold, and mildew. Structured-back carpets have an impermeable backing system, allowing spills and contaminants to be more easily removed by either carpet extraction or simple vacuuming.

Some structured-back carpet tiles are also treated with antimicrobial preservatives. These treatments help inhibit the growth of bacteria, odors, and fungi.

Additional benefits of structured-back carpeting in a healthcare environment include:

- Enhanced aesthetics
- Improved noise absorption
- Less susceptibility to shrinking, stretching, and ripples
- Less resistance to rolling traffic such as carts, beds, and medical equipment

Color is also a consideration, in both hospitals and educational facilities. A carpet that is too light in color will require considerable cleaning and maintenance to keep it looking its best. Because of this, most hospitals select darker

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colors, which are less likely to show stains, spills, and wear.

### **Schools**

Medical facilities and schools share many of the same concerns when it comes to carpet selection. These include, as discussed earlier, appearance, durability, and safety. However, in the always-budget-conscious educational environment, getting the best value—selecting the right material for maximum durability and the lowest long-term cost of ownership—is also a major concern.

In many schools, conventional carpeting, which is a broadloom, latex-backed carpet, will last about seven years. For carpeting to become cost-effective, when compared to hard-surface flooring, it should last 10, 15, or more years. This is why many educational facilities, just like hospitals and healthcare facilities, use structured-back carpets with durable nylon wear surfaces. These carpets can last 10 or even up to 25 years, depending on the quality of the carpet, foot traffic, and maintenance.

Because durability is such a primary concern, school administrators should consider selecting carpets with a “cushioned” structured backing. Unlike a “hard” backing, cushioned backings use foam or similar agents to create a cellular pad for the carpet. This adds comfort and safety and improves noise reduction. But what is even more beneficial for the school environment, the cushioned floor covering lasts longer, which is often reflected in the carpet’s warranty.

### **Cleaning and Maintenance**

Cleaning and maintaining carpets are accomplished by using two types of machines: vacuum cleaners and carpet extractors. Daily vacuuming can remove as much as 80 percent of the soils that become embedded in carpet fibers. And using carpet extractors two or more times per year is considered the most thorough way to deep clean carpets.

According to James Hlavin, Director of Business Development for Chicago-based Tornado Industries, manufacturers of a full line of professional floor and carpet care equipment, the cleaning of carpets in both healthcare and school environments is best accomplished with HEPA-filtered vacuum cleaners. “For the hospital, a HEPA-filtered machine is critically important because of immune-suppressed patients,” he says. “For schools, this high-filtration system helps eliminate impurities in the air, which can cause asthma attacks, trigger allergies, and affect other respiratory problems.”

Additionally, Hlavin suggests that both hospital and educational facilities consider the different types of vacuum cleaners now available, specifically uprights and canisters. These different types of vacuum cleaners incorporate special

features that can prove beneficial in different situations and in different areas of a facility.

For instance, if vacuuming must take place while building occupants are present, a likely scenario in a hospital, canister vacuum cleaners might prove to be most beneficial. “New canister vacuum cleaners have been introduced that are HEPA-filtered, powerful, and quiet,” Hlavin says. “Noise can be a serious problem, especially in hospitals, and a quiet vacuum cleaner with a decibel rating as low as 60 decibels will be barely noticeable.”

If an upright vacuum cleaner is chosen, which can be more powerful than a canister and agitate the carpet for improved cleaning, Hlavin suggests selecting a machine that is HEPA-filtered, quiet, and also has such features as:

- Ergonomically designed and adjustable handles. These will reduce worker fatigue and injury and accommodate both tall and short users.
- Built-in wands with attachments. Machines that can multitask will improve worker productivity. A machine with a built-in wand and flush-mounted tools allows workers to vacuum ledges, baseboards, corners, and other surfaces as well as vacuum carpets.
- Forward push. The pulling and pushing of a vacuum cleaner contribute to fatigue and even lead to injury; a machine that provides a gentle “forward push” helps eliminate this.
- Auto-clutch. When vacuuming schools and several other types of facilities, it is not uncommon for over-sized objects to get sucked in to the machine and potentially do damage. A vacuum cleaner with an auto-clutch system immediately disengages the roller when this occurs. This protects the machine and often makes it easier to remove the obstacle. Once the problem is removed, the machine automatically restarts.
- Indicator lights. A feature missing on many vacuum cleaners, especially older models, is an indicator light signaling when the filter bag is full. As the bag fills, efficiency can decline. An indicator light that notifies the user when the bag should be changed helps prevent this.

### **Carpet Extractors**

Hlavin says that the way carpets are extracted has changed in recent years. Instead of using the machine to inject chemical

solution into the carpets, most carpet cleaning professionals now “pre-spray” the carpets with cleaning chemicals. “This reduces the amount of chemical necessary,” he says, “which helps make the extraction process more environmentally preferable.”



However, because this method is becoming more commonplace,

*Selection of the proper vacuum cleaners and carpet extractors, can make carpeting a wise, long-lasting, and cost-effective choice for most medical and educational facilities.*

Hlavin says that schools and hospitals should select equipment that has enhanced vacuum systems to remove as much of the chemical and moisture from the carpet as possible. “Not only is this ‘Greener,’” he says, “but the more moisture that is removed, the quicker the carpets will dry and the less likely mold or mildew will develop.”

He also suggests that facility managers and school administrators seek out the advice—and certification—of some of the actual carpet flooring manufacturers when it comes to extractors and vacuum cleaners.

For instance, one leading major manufacturer, Tandus, which produces carpeting under such well-known names as Monterey and Crossley, now has its own testing laboratories. “Both extractors and vacuum cleaners are put through a variety of tests, some of the most stringent in the industry,” says Hlavin. “The ones that pass receive an ‘Approved Equipment’ label, and the company even requires the use of these machines in order to maintain the carpet’s warranty.”

Today’s carpet manufacturers are making greater efforts not only to add recycled content to their fiber but also to market products that are healthier and more acceptable to environmentally concerned consumers. And this, along with the selection of the proper vacuum cleaners and carpet extractors, can make carpeting a wise, long-lasting, and cost-

effective choice for most medical and educational facilities.

### **Warranties**

Both schools and hospitals should take a close look at the warranties that come with their car-pets. There are two types of warranties: prorated and non-prorated.

A prorated warranty will pay for only a percentage of the replacement costs for a carpet that wears out before its time. For instance, if a carpet has a 15- year warranty but must be replaced in 10 years, the warranty will cover approximately 35 percent of the replacement costs. The school or hospital will have to pay the balance, 65 per-cent, in order to replace the carpet.

This is not true with a non-prorated warranty. In the same scenario, if the carpet must be replaced after 10 years, the warranty will cover the full replacement costs, no matter how many years are remaining on the warranty.

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