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For the Commercial Floor Covering Industry

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SPECIFYING COMMERCIAL CARPET FOR SENIOR HOUSING

hy should carpet specified and used in senior housing be any different from any other commercial carpet application and what makes it so unique? Let's first qualify the senior housing market. There are retirement type housing properties that are the equivalent of apartments or condos. There are facilities that are subsidized for fixed income tenants that again are more like apartments where the tenants live on their own and there are facilities that care for the aged, ill or infirmed. In the empty nest type senior living establishments you're likely to find higher end residential carpet in the living spaces and hospitality or corporate type carpet in the common areas. When you move beyond this category more specialization of product comes into play. Actually that specialization could be polypropylene carpet glued directly to the substrate in the common areas and living spaces of subsidized housing for the elderly. However, the category is moving beyond such mundane and cold applications like that and concentrating on making any type of elderly facility more homelike. This is where we see more style and fashion achieved by pattern, color, texture, construction.

There are 10 factors we have determined necessary listed here that have to be taken into consideration for senior housing in all facilities regardless of category.

1. The carpet must meet ADA requirements just to be in this market which places certain obligations on the specifier, building owner and others. An important consideration is the threshold height between two areas of different surface types. Requirements by the Americans with Disabilities

Act allows carpet having a pile height of 1/2 inch or less (measured from the bottom of the tuft). Exposed edges should be fastened to floor surfaces with trim along that entire edge. Carpet with a pile height over ½ inch must have a transition



ramp between the surfaces. Ground and floor surfaces along accessible routes and in accessible rooms and spaces including floors, walks, ramps, stairs, and curb ramps, shall be stable, firm and slipresistant. If carpet or carpet tile is used on a ground or floor surface, then it shall be securely attached; have a firm cushion, pad, or backing, or no cushion or pad; and have a level loop, textured loop, level cut pile, or level cut/uncut pile.

2. Co-efficient of Friction Requirements: the flooring material cannot restrict locomotion, that is, it cannot inhibit the movement of individuals on foot or in wheeled devices across it. If soft soled shoes are worn they would have more of a tendency to grab the carpet or flooring material. Also to be considered are the use of walkers and even canes. The carpet or flooring material must not inhibit in any way the

movement of individuals or their devices of assistance to move about safely. If the material has too much grab it could instigate a trip or fall.

3. Pattern: this is very likely a characteristic that few if any consider relative to the stability of an elderly individual and the affect it has on their balance or creating vertigo. Pattern in a carpet can be very influential in creating vertigo particularly if it has a lot of swirls or elements that could make one dizzy or throw off their visual acuity. Lineal patterns would have little effect but patterns that are larger with diagonal direction or shapes that could morph into a pinwheel type design over a distance or some other optical disorientation when looking at them, could have a very compromising effect on ones balance, especially if the are unstable on their feet.



4. Surface Texture: this is another characteristic that might be overlooked in a carpet that could pose a problem in senior housing. The surface texture must not restrict or create a danger for locomotion or rolling wheel traffic. Textured patterns with exaggerated high and low lines or diagonal linearity could potentially pose a tripping hazard when walking. If the texturing in the carpet has a diagonal pattern line it can actually cause rolling wheel traffic to drift which is to roll in the direction of diagonal line. For example, in a senior care facility a resident would get up some speed in his wheel chair and it would drift into the wall - this actually happened. It would be very difficult to push cleaning carts,

gurneys, food carts or anything like them because one would be fighting the pull of the carpet. The surface of the carpet should be as smooth as possible and not pull it off a straight line. Simply put, no one should have to fight pushing anything across the carpet.

5. Product Integrity: the carpet must have high physical characteristics. This means all the structural characteristics of the carpet such as tuft bind, fiber lock, lamination strength, colorfastness, electrostatic propensity, density, stain resistance and flammability should be of the highest level. The industry standard for tuft bind is 3 pounds for cut pile carpets and 6.25 pounds for loop pile, that may be alright for senior residential housing but for assisted care or where there is a lot of rolling traffic, which is not ordinary traffic and use applications, the construction needs to be different. Tuft binds should be 10 pounds or more in these facilities. The laminate strength should be 5 pounds. There should be no filament of fiber slippage as tested with a Velcro tester on loop pile carpet, so the carpet won't fuzz. The dyes used should be resistant to fade or loss from oxidizing agents that will weaken or strip them out - solution dyed nylon is called for here. The product should be dense enough to maintain appearance retention. Flammability ratings should meet local jurisdiction codes and the carpet should not generate static shock. These are all characteristics that are built into all kinds of carpet everyday but they have to be specified. The stronger the carpet, the better it performs and the more it will cost but the benefits to the end user and occupants, not to mention complaint issues, are worth it and it's the right way to do things.



The Commercial FLOORING REPORT

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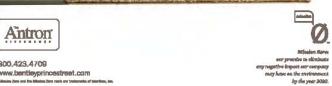
- 6. Color: the colors should be soiling hiding, easy on the eyes and not stark or sharp in contrast. Yellows, and shades of it, have no optimum range for soiling; they all show soiling quickly and ugly out. There's a color chart that will aid you in selecting products that won't come back to haunt you because they are maintenance nightmares. Just because it's pretty doesn't mean it's practical common sense must prevail.
- 7. Fiber Type: the fiber used in these applications should be high performance and good wearing solution dyed nylon. Remember, wear to the industry is abrasive loss of fiber, to everyone else who uses the product its "ugly out." So, it is important the right construction, using the right fiber is chosen. Now, we mentioned earlier that polypropylene can also work but let's qualify that again so as not to confuse. In a lower cost, subsidized project financial costs are more sensitive. A well constructed polypropylene can be used that will be naturally colorfast and stain resistant but for all other applications stick with nylon fiber and solution dyed nylon where conditions are

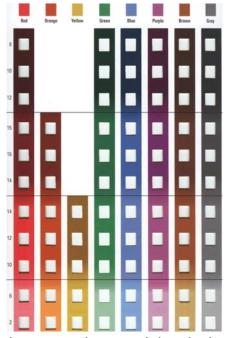
can be used that will be naturally colorfast and stain resistant but for all other applications stick with nylon fiber and solution dyed nylon where conditions are

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the most harsh. As the industry progresses there will be fibers made from corn or other crop sources, currently being tested, that eventually should make it into this market as well.

8. Backings: there is a myriad of technology in backings today. Low profile high density polyurethane cushion attached to

the carpet, in my opinion, is the best choice for a high performance backing. It will dramatically increase the performance of the carpet, provide comfort underfoot, insulate sound and temperature and can meet Green build or Leeds requirements.

9. Installation Integrity: this is a huge category but we'll keep it short and to the point. The substrate must be properly prepared; clean and dry, free of contaminants, level, and ALWAYS tested for moisture and alkalinity regardless of the age of the building. No installation should ever be started before the substrate is tested, ever. Not doing this today is tantamount to playing Russian Roulette with all the chambers in the gun loaded – you're gonna' optimize your chances of getting hurt. If the installation is commenced without the substrate being tested and corrected if necessary, that is acceptance. Whoever made the decision to begin is now responsible for any future installation failure.

The installers should be journeymen in their trade, well trained and professional; certified and qualified. High quality adhesives should be used, properly applied and all seams sealed where and when necessary depending on the product. The FreeLay System is perfect for application in senior housing and it can be available on any type carpet product.

10. Cleanability: the carpet should be the right color and construction that makes it relatively easy to clean. Spots should be easy to clean and the carpet stain resistant. A spot is not a stain and a stain is not

a spot. Spots are spills that attract soil that result in dark areas. Stains impart color or strip color from carpet – for example, bleach strips color and mustard ads color. It is beneficial if the carpet hides soil and that is done with patterns and colors, the more solid the color the greater the chances of seeing spots, stains and soil. It is imperative that there be a maintenance plan and a program appropriate for the facility and the carpet. Keeping the carpet clean not only protects and prolongs the life of the carpet but



the psychological benefits of an environment that looks goods keeps residents happy and helps sell the place. All of these categories are important and must be blended together to achieve satisfaction for the end user and the residents. You're welcome to use this information as you please, share it with anyone you like and show it to decision makers in this market to help you specify and sell the right product. All or parts of this information are applicable for any flooring product. If you have questions or need help feel free to contact us. If you want to learn more about carpet to help you understand and sell it better attend our seminar in November – see our ad.



More on Moisture

This subject is the scourge of the industry. Moisture causes more installation and product failures, cost millions of dollars to remediate, wrongfully sends tens of thousands of yards of flooring material to the land fill and creates more legal battles than almost all other flooring failure issues combined.

For those of you who are really serious and sensitive about not trashing our environment listen up. In the last four days we've had two large claims come in that were both caused by substrate moisture. Over 5,000 yards in one case that involves litigation where cut back adhesive contaminated the carpet tile because of high levels



of moisture in the concrete substrate. This tile cannot be cleaned; recycled or reused it must go to the dump. This situation would not have occurred if the concrete had been tested before the installation. Over 1,000 yards of sheet vinyl is failing because of moisture in the substrate. The GC and flooring contractor were both advised to test the concrete, they didn't and this product will wind up in the landfill. Not only are the costs of settling and resolving these types of failures expensive but they are wasteful and detrimental to our environment. Maybe looking at moisture failures from this perspective will get some of you thinking the right way. These failures can be easily prevented by taking the time to test the substrate. Once you know what's wrong you can fix it - save more time, earn more



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money and it's a step in the right direction to save the planet. Everyone is talking green but if you're overlooking this part of the puzzle you're not really serious about it. I don't care how green the flooring material is that you put down if conditions aren't right for it to stay there; then there is no sustainability. You must learn more about this to stop it – attend our Concrete, Moisture, and Sub-Surfaces Seminar at the end of October. If you have questions or need help contact us, we have the answers when no one else does.

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