Beaulieu Residential

"Tek" Newsletter

Claim Inspections: Part One

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On-Site Diagnostic Techniques for Analyzing Soiled Carpet

The use of trained and certified inspectors to determine the validity of a carpet complaint is an every-day occurrence in our industry. Manufacturers often seek advice from the observations of on-site inspectors when unsure about the reported nature of the claim. Prompt inspections containing accurate information are an essential need; not only to resolve the claim at hand, but also because some defects can have an impact on other carpets from the same production.

Because of the ripple effect some defects can have on other production it is absolutely pertinent that every effort is made to determine the exact cause of a claim. While visible defect scenarios may not require the need for samples, most inspectors understand the need to obtain scrap carpet for further testing when there is a possibility for a latent defect, and know too that they are expected to make every effort to do so.

In some cases inspectors are simply unable to obtain scrap for further analysis. Because of this, knowing how to perform certain field tests on installed carpet can often prevent the inspector from getting frustrated as they try to unravel the mysteries behind the claim cause. On the other hand, inspection reports containing nothing more than a little bromide and unnecessary verbiage can often leave the person reading the report more confused.

Regardless of the outcome of inspection, carpet manufacturers are interested in those inspectors who have the ambition to forge on in their fact finding efforts despite whatever obstacle they might encounter, and are capable of writing analytically superb and comprehensive reports supported by sound diagnostics know how.

A prime example of what can result in a claim snafu pertains to soiling complaints. Soiling in carpet can result from a lack of maintenance, poor maintenance and/or site condition influences, as well as from certain residuals used in the manufacturing of the carpet. Because of the myriad of possible causes, inspectors must be familiar with certain rudimentary test procedures to assist them in their fact-finding missions and recognize what they are observing in the process. The purpose of this newsletter is to address accelerated soiling conditions that can develop after cleaning. The procedures described here can be used when samples cannot be obtained without being invasive to the installed carpet.

If an inspector suspects that cleaning detergent residue is the result of a soiling claim the carpet will tend to feel sticky to the touch and common soils normally removed by vacuuming will tend to cling to the fiber. By applying a small amount of dry soil to an inconspicuous area of the carpet that has been recently cleaned but not trafficked and then vacuuming one can begin to determine whether or not detergent residue might be responsible for soiling.

If the inspector is now more convinced of this hypothesis, they can test further by placing a small amount of distilled or deionised water on the carpet in a cleaned site and on a site that was not cleaned and work both spots into the carpet's pile using a bone spatula or glass rod. This mechanical action will wet out the carpet's pile and suspend any water

soluble residue at these sites. Allow the water to sit for approx. 30 seconds. Next, add a small amount of water (again) to these sites, briefly agitate the carpet's pile, and then perform separate aqueous extracts from these sites using a teat pipette. Place these extractions in separate glass petri dishes, repeating this procedure until as much of the water has been extracted as possible or until the discharge reaches a depth of ¼" (.250).

Once this procedure has been completed the inspector should analyze the pH of both the extracted residues. To do so, remove approximately 1 ml from both extractions in the petri dish and place them in a clean separate vessel that was pre-rinsed in distilled or deionized water. Next, add one drop of Universal Indicator Solution to each vessel containing the 1 ml aliquot and compare the color that develops to the colored pH indicator scale. Check this pH against the pH listed on the detergent. If detergent residue is the soiling catalyst the vessel containing this extraction will tend to have a pH very similar to that of the detergent used. The pH range for most detergents designed for carpet will tend to be 7.0 (greenish-yellow) to 10.0 (blue). If a traffic lane cleaner has been used excessively the inspector may encounter a pH as high as 12.5 (purple).

The next step requires the inspector to place the petri dishes in either an oven set at 150 degrees F, place them on a radiator, or use some other form of accelerated heating (not to exceed the aforementioned temperature). The astute inspector might also notice a perfume-like odor emanating from the petri dish containing any detergent extract.

After drying, allow the residue to acclimate to ambient humidity before final analysis. This is necessary since most detergent residue will be less sticky when exposed to heat or put in a very dry environment. Once the water has evaporated the residue in the petri dishes will have returned to an undiluted state. If the residue from the previous cleaned carpet feels soft, sticky or waxy compared to the non-cleaned control sample the inspector can ascertain that the most likely cause of the soiling is due to the detergent system used, and chances are that it was either not properly diluted or it is unacceptable for use with carpet.

To further support the detergent residue conclusion the inspector can sprinkle vacuum dusts in each petri dish, close the lids, and then shake the dishes. After removing the lid and emptying out any lose contents the inspector may observe a noticeable amount of dust clinging to the petri dish containing the suspect residue. However, if the residue dries to a crystalline or powdery state soil will tend not to cling and the cause for the soiling condition observed may lie elsewhere.

The key to successful carpet cleaning cannot be found by selecting just the right detergent. Proper application and adequate recovery are equally vital if not more so to obtain a clean carpet that will not promote rapid re-soiling. Carpet that has been properly cleaned will not display soil-bonding characteristics and will respond favorably when routinely vacuumed. If a rapid re-soiling problem occurs and no samples can be obtained inspectors are often required to rely on equal parts of their sense of sight, touch, and smell, along with a touch of analytical know how in their fact-finding efforts, but the facts can usually be obtained if they are willing to look.

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