

New Carpet Odor – What's the Real Issue?

by Jeff Bishop, Clean Care Seminars, Inc.

New carpet always has a distinct odor that's all its own. Some like it and some dislike it – even fear it – intensely.

Foremost you should understand that there is no natural latex used in carpet today. Therefore, *carpet has none of the latex proteins that cause allergic reactions in sensitive people*, as might be the case with latex gloves. Let's all agree to participate in stifling that particular consumer myth about carpet, if nothing else.

And no, there isn't any formaldehyde in carpet! Hasn't been for almost 50 years and even back then, it was used as a microbial inhibitor in amounts well below thresholds considered safe for humans to breathe.

Back to new carpet odor . . .

A by-product produced by combining styrene and butadiene monomers during the manufacture of styrene butadiene latex (SBL) is 4-phenylcyclohexene (4-PC). This is the “new carpet odor” that consumers notice when carpet is first installed, but which usually disappears within 24-72 hours with proper ventilation. Its effect is minimized or eliminated by turning on the HVAC system and open windows as practical.

4-PC has generated much controversy for years and has been blamed for many adverse responses in animals and humans. In every case, other causative factors were also present. After extensive testing the U.S. EPA has stated that, "4-PC is an unremarkable chemical . . ." and that "Regulatory authority was not warranted." Regardless, carpet manufacturers have voluntarily taken steps to considerably reduce 4-PC emissions from new carpet.

*New carpet odor (4-PC) is an “unremarkable chemical” . . .
that creates no known health effect in humans.*

So why do some customers experience allergic reactions when new carpet is installed?

The problem really isn't with the new carpet. In reality it's the old carpet that was improperly disengaged and removed by the installer that's the culprit. So what can be done to prevent allergic reactions when “new carpet” is installed?

1. Foremost, carpet retailers should inform purchasers of new carpet about its distinct, albeit harmless odor, along with strategies for minimizing its impact (basically, ventilation).
2. Carpet volatile organic compounds (VOCs; e.g., 4-PC) should be “aired out” before being transported to the job site, but in some cases, this may not be practical.
3. Weather permitting, the installation area should be ventilated with forced airflow before and during installation, and after installation for 72 hours. But imagine trying to do this with outdoor temperature extremes. With moderate weather conditions, however, this is a highly practical way to prevent allergic reactions during carpet installation – whether real or imagined.

4. Existing carpet should be vacuumed thoroughly before it is disengaged and removed - but does an installer or customer ever do that? If possible, it is best to exhaust the vacuum outside the structure. In fact, this may even be a good service for a professional cleaner with a truck-mounted plant to offer to customers.
5. Rather than the installer grabbing a corner and running out the door, old carpet should be cut into four to six-foot-wide strips and rolled in three-to-four-mil plastic sheeting to contain dust and soil during removal.
6. Similarly, cushion or under pad should be rolled carefully to trap fine particles of soil that sift through carpet over time and can be easily aerosolized during pad removal.
7. Subfloors should be vacuumed (never swept) using equipment with high-efficiency filter bags that trap some 99% of particles at one micron. Vacuuming should be part of the subfloor preparation procedure anyway.
8. Finally, consumers should be advised to ventilate their structure during and for 48-72 hours after carpet installation. For the most part, this should solve the problem.

When professionals hear consumers complain about “new carpet” causing allergic reactions, they should be asked to consider the fact that new carpet often comes with new fixtures and furniture. New furnishings, adhesives and finishes can off-gas a variety of chemicals, including formaldehyde, to which sensitive persons may react. This is the most likely cause of allergic reaction when new carpet is installed, but that doesn’t mean that the new carpet is the culprit.

Typically, it’s something else.

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