

Testing a Home for Formaldehyde Release

Andy: This is a Non Toxic Environments quick take on home air testing. Welcome back to Non Toxic Environments. I am Andy Pace. This is a special edition of Non Toxic Environments, a quick take if you will. Every once in a while in between our standard weekly podcasts, I like to throw out what I call a quick take. Maybe something has caught my eye. Something has, I don't know, maybe been a source of irritation, something that our listeners probably will find very interesting, and today is no different.

This morning I had an opportunity to do one of our FRAT tests for a client. Our FRAT test, for those of who don't know, stands for Formaldehyde Release Attenuation Test. It's a test system that allows me to pinpoint exact surfaces inside of the house that are releasing formaldehyde, all the way down to one part per billion in sensitivity.

Just quickly to give you an idea what that is, the limits in a LEED project, LEED platinum building, the limit for formaldehyde is 17 parts per billion, 17. The OSHA limit for occupational exposure over an eight-hour exposure is, I believe, 40 parts per billion. The World Health Organization has deemed that anything above two parts per billion on a long-term can have detrimental effects to the human body.

If you've listened to other podcasts of mine, you'll know that I have tested building materials, home goods, even nail polish, that have tested anywhere from 100 to 4,000 parts per billion of formaldehyde. These are absolutely toxic levels.

Now, inside of the home, most indoor quality air scientists or industrial hygienists will say that anything above 50 parts per billion in the ambient air is considered a hazardous situation. So as it turns out, my testing this morning, I was brought in by another indoor air quality scientist who found that there are levels of formaldehyde, and unfortunately they don't know where it's coming from. Now this happens to be my expertise. I sell building materials, and I sell building materials specifically that are free from formaldehyde off-gassing, and therefore I know which ones are typically the offenders inside of a home. I can tell you within a few minutes of walking into the space what's going to be problematic.

Now, I can't say to what level. Matter of fact, nobody can, which is why this testing system that we have is so darn unique. You know, you hire a scientist to come into your home, and they'll charge you anywhere from a few hundred dollars to a few thousand dollars, and they'll come up with a report that says there is a level of formaldehyde that is such and such, and here's where it normally comes from, good luck. Essentially that's what it is. Here's what we think it is, and we really can't tell you what you can do to fix the problem. We can tell you there is a problem. This is where I step in.

Usually I'm referred to these projects where it's found that there is a problem but now what? Now, my customers generally are people with sensitivities, or just people who don't want to live in a toxic box, which you think would be the entire world, but unfortunately, you know, 98% of the American population would rather live with their ears blocked and their eyes covered because they don't want to hear. What they don't know can't kill them. That's what they think.

So, most homeowners and especially most contractors will never admit that there's a problem in their house, because if they actually admit it, now they actually have to learn about it and try to fix it. So anyway, I'm digressing a little bit.

I go to this home. She is extremely chemically sensitive, and she's spiraling. She is in her mid-60s. She has had sensitivities all of her life, but a situation happened in the home last fall where they applied a floor coating in the basement, and all of a sudden she's got sensitivities she never had before. It basically caused a spiraling reaction, and now her entire house is toxic to her. Before I go any further, let me just say that I see this quite a bit. Somebody who has a sensitivity to a specific chemical, or has been dealing with it for many years, they can have an exposure to something that basically caused them to now react to everything. This is what's happening. So now she's second-guessing everything that's going on in the house.

The first thing I do is I test the floor coating that she applied to make sure that it wasn't that, because that would be kind of obvious. It was not that, and I didn't think it was. When I walked into the home, I definitely did not smell that typical pungent, piercing smell of solvents coming off of a coating. But I went ahead and tested that area. I tested other things in that space to see if maybe the off-gassing from that, when it was curing, released and absorbed into other surfaces, which it can do. It can release and absorb into other soft surfaces of the space, be it

fabrics, other wall treatments, furniture, books, magazines, so on and so forth. So, it wasn't that.

I went upstairs and she had said that she normally has her worst problems either in the kitchen or the bathroom. She seems to sense the problems being worse in there. So, in examining the space, I checked the laminate floor in the kitchen. I checked the floor material in the bathroom. So, using my gut feeling on this, I decided to check the number one offender in everybody's home, and whoever has carpet in their house, it's almost always the carpet that's causing the problem.

This particular home had three different types of carpet, so I tested all three, and the one piece of carpet, the largest expanse of carpet in the house is, well, they bought the home 27 years ago. The carpet was there when they bought the home, and they haven't done anything to it since besides clean it. That particular piece of carpet was off-gassing 246 parts per billion of formaldehyde. That is an unbelievably toxic amount of formaldehyde.

Now, I had mentioned before that she had the biggest problem in the kitchen and the bathroom. It just so happens that the typical air flow through that home of front to back, front being the front room where this carpet is, and back being in the kitchen, and then in the hallway the bathroom, that's where all the air would congregate. And so it doesn't surprise me that's the rooms she was having the biggest problem.

Not to make a long story longer here, but I guess what I'm getting at is when I test homes like this for customers who are basically in, they're in a tailspin because something's causing a reaction, and they're starting to guess what it is, and when they start to guess what it is, the mind starts to play some games with them. They're thinking that everything's out to poison them. First of all, it's not true. I've worked with some very well known physicians across the country who specialize in chemicals and sensitivity, and I can tell you that they all recognize the fact that when you have sensitivities, and you're so used to everything causing a reaction, that the fear of the unknown can cause the exact same reaction.

What I mean by that is if you smell something, sense something that you've never sensed before, or it's been a long time, you instantly think that that's causing the reaction, therefore it

does cause the exact same adrenaline response that can cause your allergic reactions, your sensitivities within your body. So, the fear of the unknown can be just as detrimental as a chemical itself. This is definitely happening with this client.

We went through dozens of things that she thought it could be. The conversation then goes to, "But, but, but, what do we do if we find something? Now what? That's going to kill me." It breaks my heart because everybody I know who has sensitivities runs into the exact same situation. Here it is, folks. Not everything in this world is dangerous. Just because it has a smell doesn't mean it's dangerous. The toxicity of the specific product is the problem.

If we can find the offending product, we can fix it. How? Well, in this situation, we rip out the carpet and replace it with a flooring material that doesn't off-gas, that's not problematic. "But what about the sub-floor? What about what we expose when we take off the carpet? Just the mere fact that we're changing something, I'm fearful that that change is going to cause a reaction."

Folks, again, you have to be mindful of the fact that sometimes you have to take a step backwards to take two steps forward. And so, yes, we have to rip the floor out, and yes, we're going to expose the sub-floor, but I know we can seal the sub-floor if the sub-floor is problematic. We can use either water-based sealers, or we can use something like Dennyfoil or Too Tough or other materials that will positively seal up the formaldehyde off-gassing from the substrate below. There are ways to fix this.

There are ways to possibly seal the carpet, but in a situation like this, I don't recommend it. You know, the sealers that are out there, Safecoat makes a fantastic carpet sealer that will detoxify or at least seal up the chemical off-gassing anywhere from 70-to-90%, but there's no guarantee. In this situation, I am really reluctant to try this because she's at her wits end. We've got to do something to make this situation better immediately.

Then, there's the need for a really good quality in-home air purification system. It boggles the mind to think about people who have chemical sensitivities that do not have an air purification system. There are things that we are inundated with on a regular basis. Our clothing is

saturated with the chemicals that come from others and from other spaces. Heck, you walk into a cloud of cigarette smoke and that's 2,000 chemicals, and that attaches to your body.

So, you need to make your home that healthy sanctuary, and you need a good quality air purification system for that. And just don't believe what your furnace guy says is the right one to go with, because they're going to have you install, or install for you a system that they buy and you know, it meets their price point and they make a good chunk of change on it. I'd rather have you use something that we know works for our most chemically sensitive clients.

I am going to link everything that I'm referring to in the show notes. I am actually going to be creating show notes for this particular podcast. I haven't done that yet because of lack of time, and I apologize. But for this one I've got to create show notes, and I'm going to create a resources page to link all of the products that we recommend, be it air testing systems, air purification systems, our FRAT system; our formaldehyde testing system. I'm even going to recommend the flooring materials that I'm recommending to her, because I think it's really, really important for you to see that.

So, again, it's a quick take that's gone a little longer than normal, but I just needed to let everybody know that this happened today because this happens on a regular basis, and until the world knows that there are ways to find a problem and fix the problem, I have to keep on hammering this home because nobody else in the country is talking about this.

When I do these tests and I find the results, and I can automatically see the sense of relief coming across their faces, but then the question comes, "Why doesn't anybody else do this? How come you're the only person in North America that has this testing system?" Well, that's not true. There are a few of us. It is true, though, that I have the exclusive on this system. Why? Because nobody else cares, that's why. Nobody else finds value in this. I do, and the other scientists across the country who are now getting the system from us and they're using it with their clients, they're finding the value as well. And I hope in a year, we have 100, 1,000 people using this system to find the problem and fix the problem.

But quite honestly, what I need is somebody who's got a big heart and deep pockets who wants to help fund this because I can't. I just can't do it. And, with the listeners that we have now on

our podcast, the thousands of people who have downloaded our podcasts now around the country, folks, maybe there's somebody out there who can help with this, and I'm reaching out for that because we need to help. We need to be able to teach the world about this testing system, about the results that we can get, and the fixes. How do we fix this?

So, with that, I bid you a wonderful rest of your week. Thank you for listening. Please remember to go to degreeofgreen.com, become one of our followers. It's free with your email, and we will make sure to get you all our updates. I also hope you can go to iTunes, subscribe to Non Toxic Environments, please leave us a rating and a review would be wonderful. That's how we can get this into the hands of more people. The more people that review us and leave a rating for us, the better it is for us, and Apple and Google, and all the other podcasting resources that are out there will push us to the tops of their lists of podcasts to listen to, and we greatly appreciate that.

And ultimately, folks, this just helps you. This helps you because it'll keep us around producing these podcasts, and providing the help that we all desperately need. So, very well, thank you so much. We'll talk to you soon. Bye-bye.