

On August 17, 2021, the Washington State Departments of Ecology and Health hosted a webinar to update stakeholders on our progress identifying safer alternatives that are feasible and available to replace phthalates in vinyl flooring products and PFAS in carpets and rugs. We also provided stakeholders an update about our work on leather and textile furnishings, so certain questions in the carpets and rugs section also address these products.

**Note:** This document outlines the questions attendees asked during the webinar as well as the answers the Safer Products for WA team provided. Find the comments and input attendees shared during the webinar in the [August 17, 2021 webinar presentation](#),<sup>1</sup> including the [vinyl flooring discussion](#)<sup>2</sup> and the [carpets and rugs discussion](#).<sup>3</sup> If you have questions, contact us at [SaferProductsWA@ecy.wa.gov](mailto:SaferProductsWA@ecy.wa.gov).

## Vinyl flooring questions and answers

**Q:** Identification of reproductive and developmental toxicity for diisononyl phthalate (DINP) is not accurate. The revised GreenScreen® recognizes these endpoints as "Low" as a result of the European Chemicals Agency hazard assessment of 2018 that finds no basis to classify DINP for those hazards.

**A:** Yes, thank you, we are aware there is a revised GreenScreen® that came out for those endpoints recently. DINP scores high for carcinogenicity, so it will still fail to meet our minimum criteria for safer, but we will revise those endpoints based on that updated GreenScreen®.

**Q:** Will the restriction clearly say "ortho-phthalates" in the restriction language to avoid any confusion? I know designers get confused as well as specifiers!

**A:** That's an excellent suggestion and we are taking note of it. We realize that might be helpful for many stakeholders impacted by this.

**Q:** Considering five of these phthalates are now being reviewed under the Toxic Substances Control Act (TSCA), which triggers state pre-emption, how does Washington state intend to work around this with respect to any proposed restriction?

**A:** We are still trying to determine our processes for working with TSCA, so we can't answer this yet. Our approach to date has been to stay the course—identifying safer, feasible, available alternatives, and determining when restrictions would reduce significant sources or uses of priority chemicals. We're getting closer to rulemaking, and when we get there, we will take in that additional context. TSCA reviews are limited to the chemical use in specific applications, not in every single product, so it may or may not affect the product-chemical combinations we're assessing. Plus, TSCA pre-emptions apply to restrictions, but not reporting requirements. Even if EPA takes action under TSCA that pre-empts future restrictions in Washington state, if our statute requirements are met, we may still determine a reporting requirement is appropriate.

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[https://www.ezview.wa.gov/Portals/\\_1962/Documents/saferproducts/August\\_17\\_2021\\_Webinar\\_Presentation.pdf](https://www.ezview.wa.gov/Portals/_1962/Documents/saferproducts/August_17_2021_Webinar_Presentation.pdf)

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[https://www.ezview.wa.gov/Portals/\\_1962/Documents/saferproducts/August\\_17\\_2021\\_Webinar\\_Presentation.pdf#page=53](https://www.ezview.wa.gov/Portals/_1962/Documents/saferproducts/August_17_2021_Webinar_Presentation.pdf#page=53)

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[https://www.ezview.wa.gov/Portals/\\_1962/Documents/saferproducts/August\\_17\\_2021\\_Webinar\\_Presentation.pdf#page=112](https://www.ezview.wa.gov/Portals/_1962/Documents/saferproducts/August_17_2021_Webinar_Presentation.pdf#page=112)

**Q:** Another important hazard endpoint worth considering is asthma. Studies have found associations between exposure to phthalates off-gassing or migrating from vinyl flooring and asthma in young children. And studies have found that people with vinyl flooring have higher levels of phthalates in household dust.

**A:** We considered those two types of evidence when we listed phthalates in vinyl flooring as a priority product. The data connecting phthalates in vinyl flooring to asthma is challenging because it's an epidemiology association study—but we do see evidence of inflammation in animal models, and some phthalates are associated with skin sensitization as well. So we definitely consider that type of information, particularly the presence of phthalates in household dust and in dust from other places that have vinyl flooring like preschools, where children tend to be.

**Q:** How is Ecology thinking about phthalates in recycled vinyl? We are very concerned that recycled vinyl may contain elevated levels of phthalates such as di(2-ethylhexyl) phthalate (DEHP) and diisononyl phthalate (DINP).

**A:** We've spent a lot of time thinking about this and how we can continue to promote recycling while also thinking about ways to reduce phthalate exposure and reduce significant sources or uses of phthalates. We know that reducing intentional use will eventually reduce the concentration in recycled content. If we stop using these chemicals, eventually the recycled content will have lower levels of DEHP and DINP as well. If we implement a restriction, this is one of our questions about the specifics of that potential regulation. Do we want to focus on intentional use of these plasticizers, or do we also want to set a concentration level? Does that level need to change over time? We would appreciate stakeholder input about this.

**Q:** If recycled content is included in products, is that still going to be approached as "unintentionally added"?

**A:** We have been approaching recycled content as unintentionally added because when we look for safer alternatives, we're looking for safer alternatives to intentional use. So if we implement a potential restriction, we have to determine how we can promote recycling in a way that still reduces significant sources or uses of phthalates. We welcome input as we discuss this in more detail.

**Q:** The major flooring retailers Lumber Liquidators and Floor and Decor have set restrictions on recycled vinyl due to concerns with phthalates (and other contaminants such as heavy metals and flame retardants) in recycled vinyl.

**A:** Thank you for this context. We will definitely look into those limits.

**Q:** A restriction would make it very difficult to incorporate recycled content. Reporting requirements, on the other hand, buys you enough time to phase these phthalates out if that is ultimately the goal.

**A:** Thank you for this input. Additional details around this—related to your concerns for recycled content—would be helpful.

**Q:** Many environmental health and safer materials organizations recommend prohibiting resilient flooring containing polyvinyl chloride (PVC), due to the use of toxic chemicals like asbestos, mercury, and PFAS in the manufacturing process, and the release of dioxins and furans if PVC is burned. PVC is commonly produced in low-income, disproportionately impacted communities. How has this factored into your assessment, especially given that there are now a number of PVC-free resilient flooring products on the market?

**A:** The way our law is structured is to identify priority chemicals, then priority products, and then we look for alternatives to those chemicals in those products. If it would reduce a significant source or use, we can go through rulemaking to implement a restriction. But we cannot restrict a product, only the priority chemicals within the product. We focus our assessment of safer alternatives on the chemicals used to replace priority chemicals. While we did mention the PVC-free resilient flooring options as alternatives that are on the market, our focus has been on the priority chemicals because that's what we have the opportunity to change. But obviously it's much more complex than a single chemical class in the product.

**Q:** How will this impact future developments in the recycling of post-consumer vinyl floors in WA state?

**A:** We hope it will continue to promote recycling. We've been working with our Solid Waste Management Program at Ecology to make sure that any potential restrictions we propose would continue to promote recycling (and hopefully improve post-consumer recycled floors by reducing the toxic chemicals they contain). We're trying to balance reducing significant sources or uses (and having safer products enter the recycling process) with promoting the use of recycled content. How we frame this potential regulation will be important for balancing those factors.

**Q:** Would recycled content percentage be helpful [information to have] from the manufacturers? The percent of recycled content as you tabulate the quantity may give you a minimum threshold range for legacy ortho-phthalates.

**A:** In our manufacturer request, we asked manufacturers to share the percentage of recycled content—it was optional, but many shared that with us, so we have a sense of this. We just received the data, but we will share more about what we learned from that process soon. If there are any stakeholders who want to share input about this, we would appreciate it.

**Q:** Are the feasible and available alternatives only limited to those identified in this presentation?

**A:** No, they are not. Our goal is to identify safer, feasible, available alternatives, but not to identify all the alternatives, nor to rank any alternative options. The alternatives we outlined are what we've identified, and they can help manufacturers make the transition, but we would not require the use of any specific alternative. If a manufacturer has a preference, they can use that preferred alternative. Ideally, those alternatives are not regrettable substitutes, which is why we do so much work at Ecology to ensure we've identified a safer option, but it's not an exhaustive list.

**Q:** Could you potentially factor the use of PFAS in the manufacturing process of PVC under the PFAS component of your assessment?

**A:** If we had determined PVC was a significant source or use of PFAS in our priority product report, then we could've considered PFAS in PVC flooring. At this point, that report is finalized, and our list of priority products was not modified by the Legislature. So currently the answer is no, but at other points, it could have been yes. This is an iterative process, and the law is implemented in cycles—there will be more opportunities to address other chemicals and products in future rounds.

**Q:** It's great to see Ecology is also considering material alternatives, such as linoleum. Linoleum is a clearly safer alternative, as it's bio-based and sourced from linseed oil. Ecology should recognize that the production and disposal of vinyl flooring uses and releases numerous other highly hazardous chemicals including vinyl chloride monomer, ethylene dichloride, chlorine gas, mercury, PFAS, asbestos, and dioxins. Some of these are priority chemicals identified by WA.

**A:** We are definitely considering alternative processes in addition to alternative chemicals. This is challenging because we don't want to compare a chemical to a product when identifying safer alternatives. We want to move as far toward safer as we can. But if you only move forward when all the ingredients are safer in the alternative, that's a bigger step than moving forward with the specific chemical you're focused on. We take a more chemical-specific approach in order to prioritize what we can change, but we are certainly considering alternative processes.

**Q:** What data will be required for phthalates that are not on WA's current list? (Meaning health data. To avoid a regrettable substitute. Alternatives should be required to have a GreenScreen® Benchmark 2 or better.)

**A:** Assuming you are asking if we were to implement a reporting requirement, we haven't structured potential reporting requirements yet. But it would pertain to any ortho-phthalates, we're not limited to the [Chemicals of High Concern to Children list](#).<sup>4</sup> We're allowed to ask about a number of things in the law pertaining to the function of the chemical, and the concentration in the product. It's similar to the Children's Safe Products Act, but we haven't yet defined what we would ask for if we implemented a reporting requirement. Input around this from stakeholders is welcome. We could not require reporting for chemicals outside the priority chemical class, but we can ask about chemical hazards in Phase 1 when identifying priority chemicals.

**Q:** The [example of VinylLoop in the European Union](#)<sup>5</sup> shows that restrictions do not promote recycling.

**A:** Thank you for sharing this resource. We will consider it as we start to determine the specifics of potential regulations.

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<sup>4</sup> <https://ecology.wa.gov/Regulations-Permits/Reporting-requirements/Reporting-for-Childrens-Safe-Products-Act/Chemicals-of-high-concern-to-children>

<sup>5</sup>

[https://www.plasteurope.com/news/Closure\\_of\\_operation\\_in\\_Italy\\_Phthalates\\_issue\\_under\\_REACH\\_brings\\_do\\_t\\_240095/](https://www.plasteurope.com/news/Closure_of_operation_in_Italy_Phthalates_issue_under_REACH_brings_do_t_240095/)

**Q:** For resilient flooring, PFAS is not utilized in products. In review with manufacturers, any coatings used no longer use PFAS. Note that product selection—including vinyl products—can prevent unintentional premature failures that we have seen when product assumptions are made as perceived more sustainable. The priority chemical pathway provides clear evaluation of alternatives being readily available and suitable for equal function.

**A:** Thank you for this input, it's helpful to hear what you're learning in your conversations with manufacturers.

**Q:** This [Healthy Building Network report](#)<sup>6</sup> has useful information on PFAS used in the manufacture of chlorine gas used to make vinyl/PVC flooring and other products.

**A:** Thank you for sharing this resource, we will make sure to review it.

**Q:** There are several recycling methods being evaluated, including Microwave Solutions, chemical removal chemistry, etc. There are some really interesting methods of removing legacy chemicals from recycled content—as being required in France and Germany.

**A:** Thank you for this input, we appreciate it. We will look into this further.

**Q:** Is this flooring category restricted to indoors, or is it vinyl flooring material, both indoors and outdoors? There will be functional use of this kind of material in outdoor settings as well.

**A:** Our understanding is that the alternatives we've identified would work in all vinyl flooring applications. We know some of the alternative processes, like linoleum, won't work outside, which is part of the reason we also wanted to identify alternative chemicals. These alternatives would work and are widely used, so a restriction would potentially incorporate both indoor and outdoor products. However, we're open to input about why these alternatives might not work in a specific application.

**Q:** Is vinyl flooring made from other recycled products that are converted to vinyl flooring, or is this vinyl flooring recycled into more vinyl flooring?

**A:** Generally, we're discussing vinyl flooring being recycled into more vinyl flooring products. But the issue for this restriction is that vinyl flooring can contain recycled content that contains phthalates that are not being added as plasticizers. Products have to be recycled into other products with similar structures, and the recycled content is typically in the backing and not seen on the outside of the product. We're figuring out how we can continue to promote recycled material while reducing a significant source or use of phthalates.

**Q:** This is the [Center for Environmental Health's list of healthier resilient flooring products](#),<sup>7</sup> in case it's helpful. It aligns with Health Care Without Harm's flooring criteria.

**A:** Thank you for sharing this information, we will review it.

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<sup>6</sup> <https://healthybuilding.net/reports/20-chlorine-building-materials-project-phase-2-asia-including-worldwide-findings>

<sup>7</sup>

<https://docs.google.com/spreadsheets/d/1xKE387smYu9gYcYOHr5qoNEo8BNQOKjmhVwzHGovz1g/edit?usp=sharing>

**Q:** How will notification to low-income populations be done? They typically don't read information—particularly if English isn't their first language. How will this information be distributed? Ads on TV? This would also educate the general population as well. I think TV would be a great way—I know it is expensive but worthwhile. TV ads could include the info for people who need the information in other languages, i.e., listing the website for more information.

**A:** Right now, we're trying to figure out how to establish processes for engaging with communities who are disproportionately exposed to toxic chemicals—and doing so in culturally and linguistically relevant ways. We're trying to create public-focused, graphic-forward materials that can transcend language and reading levels. We welcome input for how we should be reaching out to low-income and overburdened populations. We use websites, social media, news releases, blog posts, and outreach materials, but TV ads aren't a typical approach, so it's good to know that's an approach you think we should take. The more we can adjust our approaches and go out to those communities, the better—but we have a lot to learn and suggestions for improvement are always welcome.

### Carpets and rugs questions and answers

**Q:** This is a [list of healthier furniture and fabrics](#)<sup>8</sup> that do not contain PFAS, nor flame retardants, added antimicrobials, VOCs, or PVCs, and it is harmonized with Health Care Without Harm's criteria.

**A:** When reviewing this resource, it's hard for us to identify whether the product has a different topical treatment or whether it is free from topical treatments. If chemicals were used to replace PFAS, we want to know what those chemicals are and whether they are safer. Conversely, if it's an untreated fabric or an alternative process that can meet the performance needs, our analysis for safer is different. If you have input or suggestions around that, it's one of the questions we usually have when reviewing resources like this.

**Q:** Regarding carpet and rugs, my understanding is that most, if not all, of the major carpet manufacturers have all moved away from PFAS and have typically switched to cationic yarn. They say that this change has happened at both the residential and commercial levels. Do you have recent research (2020 and 2021) to support that claim?

**A:** Our law requires that we use peer-reviewed science or data from other government sources, which arguably doesn't always keep up with changes manufacturers make in production for the products they sell. Our [priority consumer products report in 2020](#)<sup>9</sup> cited as recent of data as we could identify, and that still supported that PFAS are used in carpets. We did not do a manufacturer request for carpets. As we were finishing our report, a few major retailers announced that they would be moving away from selling carpet products containing PFAS. There were shifts while we've been working on this, which supports that safer alternatives are feasible and available, and should help manufacturers respond to any potential regulations we implement.

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[https://docs.google.com/spreadsheets/d/1GNHY84rgGX7rxgWg7ukYWZWBx8bVu43\\_ONAMAHInngl/edit#gid=1163922567](https://docs.google.com/spreadsheets/d/1GNHY84rgGX7rxgWg7ukYWZWBx8bVu43_ONAMAHInngl/edit#gid=1163922567)

<sup>9</sup> <https://apps.ecology.wa.gov/publications/summarypages/2004019.html>

**Q:** How are you planning to enforce these proposed regulations?

**A:** We are still trying to determine our potential regulations, so we are not there yet. At this point, the evidence supports a restriction on PFAS in carpets and rugs. That could look like a restriction on intentional use, with some testing guidance available. We're trying to sort that out. We know the City of San Francisco has some guidance for testing. We would be restricting a class and we can't measure every single chemical within the class. Total organic fluorine is another option. We're interested in gathering input from our stakeholders about this. In general, environmental regulations like this are self-implementing—so even if Ecology did not take any action to enforce a regulation, people subject to that regulation are still expected to follow it. We can presume that we would follow previous enforcement processes for other environmental regulations we implement—such as Better Brakes or the Children's Safe Products Act. We aim for compliance first, and historically we've been successful working with manufacturers to guide them with compliance.

### All product categories questions and answers

**Q:** Could there be enforcement officers like with parking enforcement? Not sure how that would work, but it would be directed toward manufacturers who don't provide samples of their ingredients to test.

**A:** We may not refer to it as an enforcement officer, but previously, with other environmental regulations, we've had a designated lead for the agency who handles compliance with that regulation. We have a dedicated person for the Children's Safe Products Act reporting, for example, who works with manufacturers to help them maintain compliance. Those people may not be full time in that role and could work on multiple projects, but in a way, that's sort of what we do to approach enforcement. As far as submitting samples for testing, it would be challenging. We would need to go to the Legislature to ask for more money to conduct product testing, which is expensive and not supported by our current budgets. Then that request would need to be approved by the Governor's Office, sent to the Legislature, and they may or may not fund it. A more likely resolution is that we have a dedicated person who is the lead for a particular chemical, and who reviews test results and information from manufacturers to ensure compliance. For other regulations, we use the product testing program to strategically spot check individual products. That is one tool to look for products that are out of compliance, and then we can get in touch with the manufacturer.

**Q:** I like the manufacturers sending in test results idea. So compliance officers/personnel—could there be full time people in these positions? Is there currently personnel who does this review? Would you be willing to go to the Legislature for a budget request in the future (maybe revenue might change in the future...)? I would be willing to be supportive in going to the Legislature for the budget.

**A:** The reason we shared that as our process is to say that we would take this route if we identify that need. So if we get to enforcement and realize that additional resources are needed for us ensure compliance effectively, what we would do is request additional funding to do that. Stakeholder input can also help in this process. For example, stakeholders identified a retailer out of compliance for another regulation related to firefighting foam. That helped us know where to spot check and investigate further. So that kind of input is beneficial as well should a regulation go in to place. Knowing the scale of the potential rulemaking process we're facing with the potential regulations we've proposed, there's definitely potential to need a full time person dedicated to enforcement, but we don't know yet. Legislators hearing from stakeholders about what they support can also be helpful.

**Q:** On can linings, you might want to talk to Kroger and Albertsons (who also owns Safeway), as both have made progress in transitioning away from bisphenol A in their private brand can linings. I can connect you with their sustainability leaders if interested in learning more.

**A:** Thank you for this suggestion and for the information about these transitions businesses are making. We plan to get in touch with you about these potential connections.

**Q:** For the paints [category], does it include all types of paint (house, latex, and oil based) and other types of paint for art?

**A:** We identified paints with lower concentrations of PCBs in four categories of paints, so that's what we're focused on. The paints category currently includes indoor and outdoor building paint (used to paint houses and commercial buildings), road paint, spray paint, and children's artistry paint.