

Overview

Under the Safer Products for Washington program, the Washington Departments of Ecology and Health (jointly “we”) identified vinyl flooring products as a significant source of ortho-phthalates in our [Priority Products Report to the Legislature](#)¹ in 2020. Peer-reviewed literature and government reports showed vinyl flooring products can contain phthalates at concentrations up to 32% by weight, and that phthalates from vinyl flooring products can leach out and expose people—particularly children who spend more time on and near the floor.

During the public comment period on our priority products report, we learned many vinyl flooring manufacturers moved away from using ortho-phthalates as plasticizers. To better assess this trend, we ordered vinyl flooring manufacturers to provide information about the presence of ortho-phthalates in their products. Find more details about the information we requested and received below.

If you have questions about this order for information, contact us at SaferProductsWA@ecy.wa.gov.

Key highlights

- Of the manufacturers reporting, the vast majority (12 out of 14) do not use any ortho-phthalate plasticizers.
- Seven manufacturers reported using the safer alternative dioctyl terephthalate (DOTP).
- Two manufacturers reported using the ortho-phthalates di (2-ethylhexyl) phthalate (DEHP) and diisononyl phthalate (DINP).
- Some manufacturers stopped using ortho-phthalates in their products as early as 2013.
- Vinyl flooring products can contain pre- and post-consumer recycled materials—which can comprise up to 75% of the product.

Vinyl flooring manufacturer order

To determine whether the market had moved away from using ortho-phthalates in vinyl flooring products, we used the authority under Chapter [70A.350.030\(4\)](#)² Revised Code of Washington (RCW) to order information from vinyl flooring manufacturers. We worked with the Resilient Flooring and Covering Institute to identify vinyl flooring manufacturers. We developed a series of questions and a template for manufacturers to use when returning information to us. We specifically asked:

- Which products (if any) intentionally used ortho-phthalates? (Ortho-phthalates present from recycled materials were not included.)
- Which ortho-phthalates were used, if any?
- Which alternative plasticizers were used, if any?
- When were ortho-phthalates phased out (if applicable)?
- Roughly how much flooring was sold in Washington with and without ortho-phthalates in 2020?
- What percentage of the product is made from recycled material?

Manufacturers were required to report whether they use ortho-phthalates. Responding to other questions was optional.

¹ <https://apps.ecology.wa.gov/publications/summarypages/2004019.html>

² <https://app.leg.wa.gov/RCW/default.aspx?cite=70A.350.030>

Results manufacturers reported

We sent the order to 15 manufacturers and to date, 14 manufacturers responded to our order. Twelve manufacturers reported they do not use ortho-phthalates as plasticizers. The most common alternative plasticizer reported was DOTP (CAS 6422-86-2). Seven manufacturers reported using DOTP. DOTP is a terephthalate that we identified as a safer alternative in our [Draft Regulatory Determinations Report to the Legislature](#).³

No manufacturer reported exclusively using ortho-phthalates. Two manufacturers reported using the ortho-phthalates DEHP and DINP in at least some products. Of these two manufacturers, one reported using ortho-phthalates in 67 out of 106 products, the other reported them in 3 out of 28 products.

Table 1. Summary of reported use of plasticizers in vinyl flooring products.

Do any products contain ortho-phthalates?	Number of manufacturers reporting	Example plasticizers reported
Yes	2	DEHP, DINP
No	12	DOTP

The seven manufacturers who reported a phase-out date (when they stopped using ortho-phthalates) all switched between 2013 and 2016.

We did not require manufacturers to report volume data. However, many did report an estimated volume sold with and without ortho-phthalates. Of the data reported, the vast majority of flooring products did not use ortho-phthalates. Two manufacturers who reported using ortho-phthalates estimated that 12% and 22% of the square yards of vinyl flooring they sold in Washington in 2020 contained ortho-phthalates.

Not requiring manufacturers to report the volume sold in Washington made it difficult to estimate the overall percentage of vinyl flooring sold in our state that contains ortho-phthalates. However, based on the volumes manufacturers reported, we expect ortho-phthalate use is lower than the estimate in our 2020 [Priority Products Report to the Legislature](#).⁴ Nevertheless, the remaining products using ortho-phthalates can expose infants, young children, and other sensitive populations to these chemicals.

Given that recycled materials may introduce ortho-phthalates into the products, we also asked manufacturers about the percentage of recycled material used. Manufacturers were not required to provide this information. Four manufacturers shared information about recycled materials in products. One manufacturer reported 0 – 5% post-consumer recycled material, and up to 34% pre-consumer recycled material. Two other manufacturers reported ranges of 7 – 75% and 10 – 20%, but did not specify pre- or post-consumer products. The fourth manufacturer reported using recycled materials but did not share the percentage. Because this information was optional to report, it is unclear whether this is representative of the industry as a whole.

³ <https://apps.ecology.wa.gov/publications/summarypages/2104047.html>

⁴ <https://apps.ecology.wa.gov/publications/summarypages/2004019.html>