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April 12, 2018

Department of Toxic Substances Control (DTSC)
Safer Consumer Products Program
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Sacramento, CA 95812-0806
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Re: Proposed DTSC Listing of Perfluoroalkyl and Polyfluoroalkyl Substances (PFASs) in Carpets and Rugs as a Priority Product

The Environmental Working Group (EWG) is a nonprofit public health and environmental research and advocacy organization based in Washington, D.C. We focus our research on potential health risks from chemical contamination of water, food, consumer products, and the environment.

EWG strongly supports the proposed listing of carpets and rugs containing PFASs as a priority product for in-depth review by the the California Department of Toxic Substances Control. This listing represents an important step forward in protecting all Californians, especially children, from toxic PFAS chemicals that, as a class, have been linked to cancer, hormone disruption, weakened immunity, reproductive changes, and harm to other body organs and tissues.

Carpets and rugs containing PFAS chemicals meet the California requirements for priority listing because:

- 1) The DTSC has already identified carpets and rugs as the largest potential sources of significant and widespread PFAS exposures, especially for children¹;
- 2) Exposure to different PFAS chemicals may impact the same toxicological endpoints, and exposure to the class of PFAS chemicals should be considered in aggregate; and
- 3) Human epidemiological studies show that at the levels found in the overall American population, PFAS chemicals are associated with weakened immune response in children, difficulty conceiving, and weight gain.

The priority listing of PFAS-containing carpets and rugs will prompt carpet manufacturers to identify and shift to safer alternatives to PFAS chemicals, creating healthier floor treatment choices for California residents. PFAS-free carpet options already exist in the marketplace,² refuting the claim that PFAS chemicals are unavoidable in carpet manufacturing. Currently, PFAS-free carpet production is limited to commercial carpeting only. DTSC priority listing will incentivize companies to develop PFAS-free options for residential use, potentially creating new jobs and stimulating innovation.

EWG strongly supports the DTSC proposal to consider all PFAS chemicals in carpets and rugs as a single functional class. While the U.S. use of fluorinated chemicals with a fluorinated carbon chain

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length of 8 or more was phased out under pressure from the Environmental Protection Agency, the replacement PFAS chemicals currently used by the carpet and rug industry are similar in structure and function to phased-out PFOA and PFOS.

Below, EWG highlights several recent reports and studies demonstrating the risks of continuing to use PFAS chemicals in carpets.

1. A 2015 report by the Danish Environmental Protection Agency found that short-chain PFAS chemicals accumulate in the lungs, liver, kidneys and other organs, and can harm the liver and kidneys. The report also found that the 6-carbon fluorinated chemical PFHxS can remain in the human body longer than PFOA and PFOS, and is more toxic to the liver than PFOS.³
2. In a Swedish study published in 2018, the 4-carbon chemical PFBA and the 6-carbon chemical PFHxA were found to have similar liver toxicity compared to PFOA.⁴
3. A 2018 study by U.S. Food and Drug Administration scientists found that the metabolites of 6:2 fluorotelomer alcohol were not only PFHxA, as 5:3 fluorotelomer carboxylic acid metabolite was identified in higher concentrations. The 5:3 fluorotelomer carboxylic acid had an overall lower clearance rate compared to PFHxA and decreased clearance with increasing exposure. It was proposed that this decreased clearance could lead to biopersistence of the 6:2 fluorotelomer and systemic toxicity.⁵
4. A 2012 study by University of Alberta researchers documented exceptionally high levels of a short-chain PFAS in the blood of a Canadian family that routinely treated its carpet with 3M's Scotchgard.⁶
5. The Madrid Statement,⁷ signed by over 200 scientists in 2015, raised concerns about the PFAS class regarding its very high persistence and potential for toxic effects.
6. A 2015 publication co-authored by the current director of the National Institute of Environmental Health Sciences states that "potential risks of the short-chain PFASs should be taken into account when choosing replacements for the longer-chain compounds."⁸

EWG's own research on PFAS chemicals has documented the widespread nature of PFAS pollution in Americans' everyday living environments.^{9,10,11}

In conclusion, EWG stands in full support of the DTSC proposal to focus on the entire class of PFAS chemicals in carpet and rug products, so as to protect Californians from these PFAS exposures.

Sincerely,

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References:

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² Healthy Building Network. Eliminating Toxics From Carpet: Lessons for the Future of Recycling. October 2017. Available at healthybuilding.net/uploads/files/eliminating-toxics-in-carpet-lessons-for-the-future-of-recycling.pdf

³ Danish Environmental Protection Agency. Short-Chain Polyfluoroalkyl Substances (PFAS) A Literature Review of Information on Human Health Effects and Environmental Fate and Effect Aspects of Short-Chain PFAS. 2015. Available at www2.mst.dk/Udgiv/publications/2015/05/978-87-93352-15-5.pdf

⁴ Gomis et al. Comparing the Toxic Potency In Vivo of Long-Chain Perfluoroalkyl Acids and Fluorinated Alternatives. Environment International. April 2018. Available at www.sciencedirect.com/science/article/pii/S0160412017320020?via%3Dihub

⁵ Kabadi et al. Internal Exposure-Based Pharmacokinetic Evaluation of Potential for Biopersistence of 6:2 Fluorotelomer Alcohol (FTOH) and its Metabolites. February 2018. Available at www.sciencedirect.com/science/article/pii/S0278691518300127?via%3Dihub

⁶ Beeson et al. Exceptionally High Serum Concentrations of Perfluorohexanesulfonate in a Canadian Family Are Linked to Home Carpet Treatment Applications. Environmental Science and Technology. October 2012. Available at pubs.acs.org/doi/abs/10.1021/es3034654

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¹⁰ EWG. Teflon Chemical Harmful at Smallest Doses. August 2015. Available at www.ewg.org/research/teflon-chemical-harmful-at-smallest-doses and

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