



Center for the
Polyurethanes Industry

July 28, 2020

Linda Kildahl
Air Quality Planner
Air Quality Program
Washington State Department of Ecology

Submitted electronically via E-Comment Portal

RE: Proposed Regulation Chapter 173-443 WAC - Hydrofluorocarbons

Dear Ms. Kildahl,

The American Chemistry Council's Center for the Polyurethanes Industry¹ (CPI) appreciates the opportunity to comment on the Washington State Department of Ecology's (DoE) proposed *Chapter 173-443 WAC - Hydrofluorocarbons (HFCs)* regulations (proposed regulations). We appreciate DoE's efforts to respond to the issues raised in our March 25, 2020, comments on the pre-rulemaking draft regulations. CPI believes that additional changes are needed to fully respond to our comments and to improve the clarity and intent of the final rule.

CPI supports consistency across all states that are regulating the use of HFC foam blowing agents in the polyurethane foam sector. CPI advocates for consistency in four areas: definitions, disclosure, recordkeeping, and sell-through periods. CPI believes our recommendations will help further align the proposed regulations with other state rules prohibiting the use of HFC foam blowing agents and provide manufacturers with enough clarity to ensure they are compliant with the final rule. Below, CPI recommends changes to the applicability and labeling sections of the draft regulations. CPI views the changes to the labeling requirements as a priority. CPI requests that DoE focus on addressing our concerns with the labeling requirement first and addressing our comments on the applicability section as a secondary alternative.

CPI has an overarching concern that the proposed regulations implement specific requirements for spray polyurethane foam systems that should logically apply to all other polyurethane foam systems. DoE is implementing a new definition for "foam systems," but the proposed regulations only reference spray polyurethane foam systems. It is important that DoE clarify the requirements for all polyurethane foam systems – not just spray polyurethane foam systems. CPI provides below several changes to broaden the proposed regulations to ensure references to polyurethane foam systems are clear.

Additionally, we respectfully submit the following comments:

1. Definitions:

In our comments on the pre-rulemaking draft regulations, CPI highlighted inconsistencies in the definitions for polyurethane end uses in the draft regulations. The polyurethane end use definitions

¹ The Center for the Polyurethanes Industry's (CPI) mission is to promote the growth of the North American polyurethanes industry through effective advocacy, delivery of compelling benefits messages demonstrating how polyurethanes deliver sustainable outcomes, and creation of robust safety education and product stewardship programs.



referenced various terms such as “polymers,” “polyurethane polymers,” “polyurethane,” “radicals,” “urethane,” and the raw materials used to form polyurethane polymers. In our comments on the pre-rulemaking draft, CPI suggested adopting a definition for “polyurethane,” and then referencing this term in the definition of the different end uses. DoE adopted the new definition for polyurethane, but did not correct the technical issues with the polyurethane end use definitions. Amending these definitions, per the suggestions below, will improve the technical accuracy of the final regulations.

Accordingly, CPI recommends the following changes:

- “Flexible Polyurethane” means a non-rigid ~~synthetic polyurethane~~ foam ~~containing polymers created by the reaction of isocyanate and polyol~~, including but not limited to that used in furniture, bedding, and chair cushions and shoe soles.

Shoe soles can be made from flexible polyurethane or integral skin polyurethane. Accordingly, CPI recommends not using shoe soles as an example product.

- “Foam Blowing Agent” means a product or substance ~~used to produce the product with a cellular structure formed via a foaming process in a variety of materials that undergo hardening or phase transition~~ that functions as a source of gas to generate bubbles in the mixture during the formation of foam.
- “Foam system” means a multipart liquid ~~product material~~ that expands when mixed to form a foam solid or flexible substance in which thin films of material separate pocket of gas.

The proposed regulations include a definition of “foam.” CPI recommends referencing the definition of “foam” in the definition of “foam systems.” This change further aligns the definition of “foam systems” with industry understanding of these terms.

- “Integral Skin Polyurethane” means a ~~synthetic~~ self-skinning polyurethane foam ~~containing polyurethane polymers formed by the reaction of an isocyanate and a polyol~~, including but not limited to that used in ~~shoe soles and~~ car steering wheels and dashboards.

Shoe soles can be made from flexible polyurethane or integral skin polyurethane. Accordingly, CPI recommends not using shoe soles as an example product.

- “Rigid Polyurethane Appliance Foam” means polyurethane ~~insulation~~ foam in domestic appliances used for insulation.
- “Rigid Polyurethane Commercial Refrigeration and Sandwich Panels” means polyurethane foam used to provide insulation ~~for use~~ in walls and doors, including that used for commercial refrigeration equipment, and used in doors, including garage doors.
- “Rigid Polyurethane High-pressure Two-component Spray Foam” means a liquid polyurethane foam system sold as two parts (i.e., A-side and B-side) in non-pressurized containers; product that is pressurized 800-1600 pounds per square inch (psi) during manufacture; sold in pressurized containers as two parts (i.e., A-side and B-side); and is field or factory blown applied in situ using high-pressure proportioning pumps at 800-1600 pounds per square inch (psi) and an application gun to mix and dispense the chemical components. to propel the foam components, and may use liquid blowing agents without an additional propellant.

- “Rigid Polyurethane Low-pressure Two-component Spray Foam” means a liquid polyurethane foam system product sold as two parts (i.e., A-side and B-side) in containers that are is pressurized to less than 250 psi during manufacture of the system for application without pumps; sold in pressurized containers as two parts (i.e., A-side and B-side); and are typically applied in situ relying upon a liquid blowing agent and/or gaseous foam blowing agent that also serves as a propellant so pumps typically are not needed.
- “Rigid Polyurethane Marine Flotation Foam” means buoyancy or flotation polyurethane foam used in boat and ship manufacturing for both structural and flotation purposes.
- “Rigid Polyurethane One-component Foam Sealants” means a polyurethane foam generally packaged in aerosol cans that is applied in situ using a gaseous foam blowing agent that is also the propellant for the aerosol formulation.
- “Rigid Polyurethane Slabstock and Other” means a rigid closed-cell polyurethane foam containing urethane polymers produced by the reaction of an isocyanate and a polyol and formed into slabstock insulation for panels and fabricated shapes for pipes and vessels.

2. Sell-Through Period

CPI supports clear and explicit sell-through periods. In the polyurethane foam sector, there are different processes used to manufacture the variety of foam products on the market. For foam board products, such as rigid polyisocyanurate boardstock and rigid polyurethane boardstock foam, flexible foam, and thermoplastic foam, CPI understands “manufacture” to mean the date the manufacturer combines the component chemicals (e.g., polyol, blowing agent, catalyst, and isocyanate) in a factory to form the foam product. For polyurethane foam systems, including but not limited to spray polyurethane foam, CPI understands “manufacture” of polyurethane foam systems to mean the date a manufacturer combines component chemicals (e.g., polyol, blowing agent, catalyst) to form the polyol resin blend and packages the blend in the drum, canister, or can that is sold to end users for application. However, for both types of products, CPI understands “use” to mean the date the product is installed, either as a foam board or as an in-situ applied polyurethane foam. Blended polyurethane foam systems have a shelf life of approximately six months, which requires users to quickly cycle product and prevents stockpiling of inventory.

CPI appreciates DoE including a sell-through period in section WAC 173-443-060 Prohibitions. (2). However, the sell-through provision does not explicitly allow products to be used after they are manufactured. While “use” of a product is likely included in the term “otherwise introduced into Washington commerce,” inserting language to clearly state product manufactured before the date of restriction can be used after the date of restriction will further align DoE’s regulations with other states regulating, or proposing to regulate, HFC foam blowing agents. Most other states (*i.e.* California, Colorado, Delaware, New Jersey, etc.) specifically include the term “use” in their sell-through provisions. CPI suggests the following changes to section WAC 173-443-060 Prohibitions. (2):

Products and equipment manufactured prior to the applicable effective date of a prohibition in WAC 173-443-040 may be used, sold, leased, rented, or otherwise introduced into Washington commerce after the date of prohibition.

CPI appreciates DoE’s inclusion of a sell-through provision for spray polyurethane foam systems in section WAC 173-443-060 Prohibitions. (2)(c). DoE’s amendments, per our March 25, 2020 comments, to the sell-through provisions clarify the intent of the sell-through period as it relates to spray polyurethane foam systems. However, CPI believes it is logical to extend this sell-through period to all

polyurethane foam systems. Accordingly, CPI recommends the following changes to section WAC 173-443-060 Prohibitions. (2)(C):

Polyurethane Spray foam systems manufactured (blended) before an applicable prohibition date and not yet applied on site may be used after the prohibition date.

3. Product labeling and disclosure requirements

In response to comments raised during the July 21, 2020 stakeholder workshop, CPI would like to clarify that the following comments apply to polyurethane products and do not apply to products that contain polyurethane foam. CPI defers issues related to the labeling of appliances and refrigerators to the manufacturers of these products.

CPI acknowledges DoE's efforts to build flexibility into the disclosure requirements. Given that HB 1112 (2019) is somewhat restrictive, CPI appreciates that DoE's proposed disclosure requirements provide options to leverage disclosure requirements in other states regulating HFCs and online disclosures. However, it is not clear why DoE is requiring a disclosure on the label *and* online disclosure for polyurethane materials. If a product label provides disclosure of the substitute, an additional online disclosure should not be required. Mandating manufacturers to place a disclosure on the product and online is a significant expansion of the disclosure requirements, beyond the intent of HB 1112. Further, DoE's labeling requirements have become somewhat complex. CPI recommends developing a more streamlined approach.

CPI's preferred solution would be to allow polyurethane manufacturers to disclose the compliance status of polyurethane products on the label and disclose the exact substitute used in the product using an online disclosure. Providing a disclosure statement, focused on compliance status, will provide regulators and product users the information needed to ensure that product being installed in Washington complies with the final regulations. This change aligns the Washington HFC labeling requirements with other states. Implementing the changes outlined below will allow the necessary flexibility to comply with Washington's disclosure requirements and the disclosure requirements of other states without additional disclosure statements or separate product labels for products sold in Washington.

CPI supports the following disclosure statement for polyurethane foam products: "Where sold, compliant with State HFC regulations." CPI anticipates that this language will be included in final rules in Delaware and Maryland and is supporting its use in other states with pending HFC regulations. The proposed regulations require DoE to approve the label disclosure language before it is used. CPI requests DoE approve this language by including it as an option in the final regulations. Finally, CPI suggests providing this disclosure option for all uses of foam products.

CPI recommends the following changes to section WAC 173-443-070:

WAC 173-443-070 (6)

- (a) For foam non-retail products:
 - (i) Unit label; or
 - (ii) One of the following methods for each individual product within a unit:
 - (A) New dedicated label;
 - (B) Existing product label;
 - (C) The following statement on the product or product packaging "Where sold, compliant with State HFC regulations" A label required by another jurisdiction with sufficient HFC disclosure requirements and online disclosure of the substitute; or

(D) On-product symbol or code; and online disclosure.

(b) For foam retail products:

- (i) New dedicated label;
- (ii) Existing product label;
- (iii) On-packaging label;
- (iv) The following statement on the product or product packaging “Where sold, compliant with State HFC regulations” A label required by another jurisdiction with sufficient HFC disclosure requirements and online disclosure of the substitute;
- (v) On-product symbol or code; and online disclosure; or
- (vi) On-packaging symbol or code; and online disclosure.

(c) For the foam blowing agent used in polyurethane foam systems, including spray foam systems:

- (i) New dedicated label on the canister or cylinders;
- (ii) Existing product label on the canister or cylinders;
- (iii) The following statement on the product or product packaging “Where sold, compliant with State HFC regulations” and online disclosure of the substitute On-packaging label; or
- (iv) On-packaging symbol or code; and online disclosure.

The current requirement for the disclosure of substitutes is vague. HB 1112 requires manufacturers to “disclose the substitutes used in its products or equipment.” The proposed regulations do not provide any guidance for the disclosure of substitutes. CPI recommends DoE allow manufacturers to include generic chemical names, such as “hydrofluoroolefin” or “HFO,” as opposed to including the specific chemical name in online or on-product disclosures. This solution provides DoE with the necessary information to ensure products are compliant, while protecting confidential business information. CPI requests that DoE include language in the final rule that affirms the use of generic chemical names in the disclosure.

Allowing on-product disclosures of compliance status, online disclosures of substitutes, and generic chemical names in the disclosure will provide polyurethane manufacturers the necessary flexibility to comply with multiple disclosure requirements without the need to produce specific labels for Washington.

4. Applicability of Labeling Provisions

CPI believes section WAC 173-443-020 Applicability. needs additional clarification to ensure it provides a functional exemption for the labeling of polyurethane products. Section WAC 173-443-020 (2)(a) states:

The labeling requirements in WAC 173-443-070 apply to manufacturers of products or equipment that contains, uses, or will use HFCs as of July 28, 2019, or to manufacturers that introduce such products or equipment into Washington commerce after that date.

And, the *Preliminary Regulatory Analysis* document states:

The proposed rule would determine that labeling requirements apply to manufacturers of products with HFCs as of July 28, 2019, or anytime after that date.

These statements imply that the requirements of the labeling provision apply to product manufacturers, not to specific products. This exemption will likely not significantly reduce the regulatory burden on polyurethane manufacturers. For example, before the date of restriction for HFC foam blowing agents in

polyurethane end use categories, some polyurethanes manufacturers had multiple formulas on the market. During this transition, manufacturers may have had products based on low-GWP foam blowing agent alternatives and products based on HFC foam blowing agents available in Washington. Further, polyurethane manufacturers, like most product manufacturers, have a complex distribution chain. It is difficult for manufacturers to verify whether products containing restricted HFCs were available in Washington State on July 28, 2019. With the exception of low-pressure SPF, the use of HFC foam blowing agents is now restricted in Washington. It does not seem practical to further penalize manufacturers for the previous use of chemicals that are now banned in Washington.

The statements in the proposed regulations and the *Preliminary Regulatory Analysis* raise several questions. Does DoE plan to only exempt manufacturers that only had low-GWP formulations on the market as of June 28, 2019? If DoE is willing to exempt some low-GWP products, why would DoE not extend this exemption to all low-GWP products? This is an arbitrary concept that should be reconsidered.

To improve the utility of the applicability exemption, CPI recommends two changes to the disclosure applicability. First, the exemption should apply to individual products, rather than an entire manufacturer's portfolio. Second, the exemption date should be extended to the effective date of restriction for each end use. CPI believes these changes will clarify the scope of the exemption and improve its utility. Essentially, these changes allow DoE to simply exempt all low-GWP products from the labeling provisions.

Accordingly, CPI suggests the following changes:

The labeling requirements in WAC 173-443-070 and the notification requirements in WAC 173-443-080, WAC 173-443-090, and WAC 173-443-100 apply only to ~~manufacturers of~~ products or equipment that consist~~ed~~ of, or use~~d~~, HFCs on or after the date of restriction per end use category after July 28, 2019, or manufacturers of products or equipment that have initiated producing such products at any time after that date.

If you have any questions or need additional information, please contact me at Stephen.wieroniey@americanchemistry.com, or (202) 249-6617.

Sincerely,



Stephen Wieroniey
Director