



A PRACTICE GREENHEALTH PROGRAM

Guidance to Achieve HH Safer Chemicals Challenge for Healthy Interiors

Version 2.0

November 2015

This document provides guidance for institutions and suppliers wishing to meet the requirements for the Healthy Interiors goal of the Healthier Hospitals Safer Chemicals Challenge, Version 2.0.

Healthy Interiors Goal

Ensure that 30 percent of the annual volume of furnishings and furniture purchases (based on cost) eliminate the use of formaldehyde, perfluorinated compounds, polyvinyl chloride (PVC), antimicrobials*, and all flame retardants**.

*Triclosan and triclocarban are explicitly prohibited. No other added or built-in chemical antimicrobials are allowed unless they are registered with the U.S. EPA under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), and have published data that show efficacy in a hospital/clinical setting measured by a reduction in healthcare-associated infections (HAIs) as part of comprehensive infection control measures. Antimicrobials added to materials or products for the sole purpose of preserving the product are exempt.

** Eliminate the intentional use of all flame retardants where code permits. When flame retardant chemicals are necessary to meet code requirements, use chemicals that meet GreenScreen Benchmark 3 or 4 or their equivalent.

Scope of Products Covered

Furnishings and furniture include seating (chairs, stools, sofas, benches, etc.), work surfaces (tables, desks, etc.), built-in and modular casework, systems (walled desks with seating), beds (including mattresses), storage units (cabinets, filing cabinets, dressers, drawers, etc.), shelving (bookshelves, built-in shelves, etc.), panels and partitions, cubicle curtains, and window coverings.

Exemption: The electronic components of furnishings and furniture are exempt from the goal.

Product Attributes

1. Formaldehyde

- *Definition:*

Formaldehyde is a colorless, flammable gas at room temperature, used mainly to produce resins used in composite wood products (e.g., plywood, particle board, medium density fiberboard) and as an intermediate in the synthesis of other chemicals and in some fabrics.¹

Volatile Organic Compounds (VOCs) are carbon compounds emitted as gases from certain solids and liquids. VOCs include a variety of chemicals, including formaldehyde, some of which may have short- and long-term adverse health effects. VOCs are emitted by a wide array of products numbering in the thousands.²

- *Guidance:*

New furniture and furnishings must be tested in accordance with ANSI/BIFMA Standard Method M7.1–2011. Comply with ANSI/BIFMA e3-2011 Furniture Sustainability Standard, Sections 7.6.1 and 7.6.2, using either the concentration modeling approach or the emissions factor approach. Model the test results using the open plan, private office, or seating scenario in ANSI/BIFMA M7.1, as appropriate. USGBC-approved equivalent testing methodologies and contaminant thresholds are also acceptable.

Salvaged and refurbished furniture more than one-year old at the time of use is considered compliant, provided it meets the requirements for any site-applied paints, coatings, adhesives, and sealants.

- *Verification:*

Suppliers should provide, upon request:

- evidence of ANSI/BIFMA testing data (with the exception for salvaged or refurbished furniture), verifying compliance; or
- complete information in the Health Product Declaration³ on product content related to these chemicals, verifying compliance.

¹ Formaldehyde, U.S. Environmental Protection Agency, <http://www.epa.gov/ttnatw01/hlthef/formalde.html#ref1>, accessed September 2015.

² An Introduction to Indoor Air Quality: Volatile Organic Compounds (VOCs), U.S. Environmental Protection Agency, <http://www.epa.gov/iaq/voc.html>, accessed September 2015.

³ HPD Collaborative, <http://www.hpd-collaborative.org/>, accessed September 2015.

2. Per- and poly-fluorinated compounds (PFCs)

- *Definition:*

PFCs are defined in this guidance as a category of compounds that includes long and short chain per- and poly-fluorinated alkyl compounds and fluorinated polymers. This guidance pertains to any compound that meets any one of the definitions below. PFCs are widely used to make everyday products, including furnishings and fabrics, more resistant to stains, grease, and water.⁴

Perfluoroalkyl substances: Compounds for which all hydrogen atoms on all carbon atoms (except for carbons associated with functional groups) have been replaced by fluorine atoms.

Polyfluoroalkyl substances: Compounds for which all hydrogen atoms on at least one (but not all) carbon atom have been replaced by fluorine atoms.

Fluoropolymers: Carbon-only polymer backbone with fluorine atoms directly bound.

Perfluoropolyethers: Carbon and oxygen polymer backbone with fluorine atoms directly bound to carbon atoms.

Side-chain fluorinated polymers: Variable composition non-fluorinated polymer backbone with fluorinated side chains.

- *Guidance:*

Products supplied must not use stain- or water-repellant treatments that contain a PFC meeting any one of the above definitions.

- *Verification:*

Suppliers should provide, upon request:

- o a formal declaration stating that the product supplied does not contain PFCs (as defined herein) as stain- or water-repellant treatments. The declaration must be written, signed, and dated by the manufacturer on the manufacturer's letterhead;
- o laboratory testing data from an accredited lab, verifying compliance; or
- o complete information in the Health Product Declaration on product content related to these compounds, verifying compliance.

⁴ Perfluorinated Chemicals (PFCs), National Institute of Environmental Health Sciences, http://www.niehs.nih.gov/health/materials/perflourinated_chemicals_508.pdf, accessed September 2015.

3. Polyvinyl chloride (PVC)

- *Definition:*

Polyvinyl chloride (PVC), or vinyl, is a synthetic thermoplastic material made by polymerizing vinyl chloride. The properties of the material depend on the additives, including plasticizers. PVC has a wide array of uses.⁵

- *Guidance:*

Products supplied must not contain PVC.

Exemption: Products made up of less than 1% (one percent) of PVC by weight are exempt.⁶

- *Verification:*

Suppliers should provide, upon request:

- a formal declaration stating that the product supplied does not contain polyvinyl chloride (beyond the exemption). The declaration must be written, signed, and dated by the manufacturer on the manufacturer's letterhead;
- laboratory testing data from an accredited lab, verifying compliance; or
- complete information in the Health Product Declaration on product content related to this material, verifying compliance.

4. Antimicrobials

- *Definition:*

Antimicrobials are substances or mixtures of substances designed to destroy or suppress the growth of harmful microorganisms.⁷

- *Guidance:*

Products supplied must not contain triclosan and triclocarban. No other added or built-in chemical antimicrobials are allowed unless they are registered with the U.S. EPA under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), and have published data that show efficacy in a hospital/clinical setting measured by a reduction in healthcare-associated infections (HAIs) as part of comprehensive infection control measures.

Exemption: Antimicrobials added to materials or products for the sole purpose of preserving the product are exempt from this goal.

⁵ PVC and Phthalates, The Issue, Health Care Without Harm, http://www.noharm.org/us_canada/issues/toxins/pvc_phthalates/, accessed September 2015.

⁶ The LEED pilot credit references a 5% exemption. This guidance provides for only a 1% exemption.

⁷ Health Care Furniture Design – Guidelines for Cleanability, BIFMA, https://c.ymcdn.com/sites/www.bifma.org/resource/resmgr/standards/BIFMA_CleanGuide_6Oct14.pdf, accessed September 2015.

Rationale: With rare exceptions, very few data support the use of antimicrobials in furniture as a means of helping reduce healthcare-associated infections (HAIs). Some antimicrobials pose risks to human health and the environment and may contribute to antimicrobial resistance. Moreover, the presence of antimicrobials in furniture may lead to a false sense of security and result in less stringent infection control practices. The goal is structured to allow for the use of antimicrobials where research shows that they contribute to reduced incidence of HAIs. This is an emerging and active area of research, and this goal may change as additional data are available.

- *Verification:*

Suppliers should provide, upon request:

- a formal declaration stating that the product supplied does not contain antimicrobials. The declaration must be written, signed, and dated by the manufacturer on the manufacturer's letterhead;
- laboratory testing data from an accredited lab, verifying compliance; or
- complete information in the Health Product Declaration on product content related to this material, verifying compliance.

5. Flame Retardants

- *Definition:*

Flame retardants are chemicals/compounds added to materials such as plastics, textiles, surface finishes, and coatings that inhibit, suppress, or delay the production of flames to prevent the spread of fire.

- *Guidance:*

Products supplied must contain less than 1000 ppm of intentionally-added flame retardants by weight of the homogeneous⁸ material⁹ where code permits. When flame retardant chemicals are necessary to meet code requirements, use chemicals that meet GreenScreen Benchmark 3 or 4 or their equivalent.¹⁰

⁸ We are using the definition of "homogeneous" from the RoHS Directive: *Homogeneous material* means a material that cannot be mechanically disjointed into different materials. A homogeneous material is "of uniform composition throughout." Examples of "homogeneous materials" are individual types of plastics, ceramics, glass, metals, alloys, paper, board, resins, and coatings. The term "mechanically disjointed" means that the materials can, in principle, be separated by mechanical actions such as unscrewing, cutting, crushing, grinding, and abrasive processes. Example: A plastic cover is a "homogeneous material" if it consists of one type of plastic that is not coated with or has attached to it or inside it any other kind of materials.

⁹ The LEED pilot credit requires a de minimus of 100 ppm. This guidance requires a de minimus of 1000 ppm.

¹⁰ GreenScreen for Safer Chemicals, <http://www.greenscreenchemicals.org/method/method-documents>, accessed September 2015.

- *Verification:*

Suppliers should provide, upon request:

- a formal declaration stating that the product supplied does not contain intentionally-added flame retardants above the stated threshold. The declaration must be written, signed, and dated by the manufacturer on the manufacturer's letterhead;
- laboratory testing data from an accredited lab, verifying compliance; or
- complete information in the Health Product Declaration on product content related to these chemicals, verifying compliance.

Disclosure

HH Safer Chemicals Challenge suppliers are encouraged to provide information on the presence of formaldehyde, perfluorinated compounds, PVC, antimicrobials, and flame retardants in all targeted products. Laboratory testing data from an accredited lab is the gold standard for disclosure. We also encourage suppliers to provide this information through a complete Health Product Declaration.