



Guidance to Achieve HHI Safer Chemicals Challenge for Healthy Interiors

July 2013

This document provides guidance for institutions and vendors wishing to meet the requirements for the Healthy Interiors portion of the Healthier Hospitals Initiative's Safer Chemicals Challenge.

Healthy Interiors Challenge

Ensure that 25 percent of the annual volume of freestanding furniture and medical furnishings, purchases based on cost, eliminate the intentional use of halogenated flame retardants, formaldehyde, perfluorinated compounds, and PVC (also known as vinyl).

Scope of Products Covered

- *HHI defines "furniture and medical furnishings" in line with LEED for Health Care (LEED MR Credit 5: Furniture and Medical Furnishings)*

"Medical furnishings" include mattresses, foams, panel fabrics, cubicle curtains, window coverings, and other textiles.

"Furniture" is defined as any fixtures, such as seating, desking/workstations/systems furniture, tables, storage units, shelving, casework, and literature racks, purchased as a free standing or modular unit, regardless of where the assembly takes place.

- *The electronic components of furniture are exempt from the challenge.*

Product Attributes

1. Halogenated Organic Flame Retardants

- *Definition:*

Halogenated flame retardants are chemical compounds containing halogens, primarily chlorine or bromine, bonded to carbon. They are used in commercial and consumer products to meet flammability requirements.ⁱ

- *Guidance:*

Products supplied must contain less than 1000 ppm of intentionally added halogenated organic flame retardants by weight of the homogenous¹ material.²

- *Verification:*

Supplier should provide, upon request

- a formal declaration stating that the product supplied does not contain intentionally-added halogenated flame retardants above the stated threshold. The declaration must be written, signed, and dated on the manufacturer's letterhead by the manufacturer;
- 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.

2. Formaldehyde

- *Definition:*

Formaldehyde is a colorless, flammable gas at room temperature, used mainly to produce resins used in particleboard products and as an intermediate in the synthesis of other chemicals and in some fabrics.ⁱⁱ

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.ⁱⁱⁱ

- *Guidance:*

New furniture and furnishing items 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.

¹ 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 homogenous 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.

² The LEED pilot credit requires a deminimus of 100 ppm. This guidance requires a deminimus of 1000 ppm.

- *Verification:*

Suppliers should provide, upon request

- evidence of ANSI/BIFMA testing data (with the exception for salvaged or refurbished furniture), verifying compliance; or
- verifying information from the Health Product Declaration.

3. Perfluorinated Compounds (PFCs)

- *Definition:*

A perfluorinated compound (PFC) is a compound in which all carbon-hydrogen bonds in a chain have been replaced by carbon-fluorine bonds. PFCs are widely used to make everyday products, including furnishings and fabrics, more resistant to stains, grease, and water.^{iv}

- *Guidance:*

Products supplied must not use stain-repellant treatments that contain perfluorinated compounds.

- *Verification:*

Suppliers should provide, upon request

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

4. Polyvinyl chloride (PVC)

- *Definition:*

Polyvinyl chloride (PVC) 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.^v

- *Guidance:*

Products supplied must not contain PVC.

Small components exemption: Components that constitute less than 1% (one percent) of the product by weight are exempt.³

³ The LEED pilot credit references a 5% exemption. This guidance provides for only a 1% exemption.

- *Verification:*

Supplier should provide, upon request

- a formal declaration stating that the product supplied does not contain polyvinyl chloride (beyond the small component exemption). The declaration must be written, signed, and dated on the manufacturer's letterhead by the manufacturer;
- 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.

Disclosure

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

ⁱ Halogenated Flame Retardant Chemicals, Green Science Policy Institute,

<http://www.greensciencepolicy.org/halogenated-flame-retardant-chemicals>, accessed July 2013.

ⁱⁱ Formaldehyde, U.S. Environmental Protection Agency, <http://www.epa.gov/ttnatw01/hlthef/formalde.html#ref1>, accessed July 2013.

ⁱⁱⁱ An Introduction to Indoor Air Quality: Volatile Organic Compounds (VOCs), U.S. Environmental Protection Agency, <http://www.epa.gov/iaq/voc.html>, accessed July 2013.

^{iv} Perfluorinated Chemicals (PFCs), National Institute of Environmental Health Sciences, http://www.niehs.nih.gov/health/materials/perflourinated_chemicals_508.pdf, accessed July 2013.

^v PVC and Phthalates, The Issue, Health Care Without Harm, http://www.noharm.org/us_canada/issues/toxins/pvc_phthalates/, accessed July 2013.