Guidance for Manufacturers to Achieve the Healthy Interiors:
Furniture and Furnishings Criteria
Version 2.4 (clarifications and updates)
Revised August 2022

This document provides guidance for manufacturers to meet the requirements of the Healthy Interiors criteria, Version 2.4.

Healthy Interiors Criteria
Furniture and furnishings must not contain:

- Formaldehyde
- Per and poly-fluorinated compounds (PFAS)
- Polyvinyl chloride (PVC)
- Antimicrobials
- Flame retardants

Greenhealth Approved
The Greenhealth Approved program builds on the legacy of the Healthier Hospital Initiative by providing an easy way to identify products that meet the criteria of Health Care Without Harm and Practice Greenhealth. The program uses a transparent validation process that is either completed by Greenhealth Approved resources, or through collaboration with a third-party certifier. When a product carries the Greenhealth Approved seal, health care organizations can be confident it meets the product category criteria .

BIFMA Credit

BIFMA credit 7.4.4 mirrors the Healthy Interiors chemical criteria for furnishings. To reduce redundancies in efforts, Greenhealth Approved is collaborating with Business Institutional Furniture Manufacturers Association (BIFMA). Through this collaboration, the Healthy Interiors criteria have been incorporated into the ANSI/BIFMA e3-2019 Furniture Sustainability Standard, as credit 7.4.4 Targeted Chemical Elimination.

Manufacturer products submitted for the Greenhealth Approved license must first be BIFMA Level certified including optional credit 7.4.4. These efforts ensure products are vetted against Health Care Without Harm's criteria while reducing data submission duplication.

The furnishings categories included in BIFMA certification, and eligible for the Greenhealth Approved seal are:

- Built-in and modular casework
- Panels and partitions
- Seating (chairs, stools, sofas, benches, recliners, loungers, etc.)
- Storage units and shelving (cabinets, filing cabinets, dressers, drawers, shelves, etc.)
- Systems (multi-component furniture systems)
- Work surfaces (tables, desks, overbed tables, etc.)

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

Verification

Manufacturers can demonstrate which products meet the Healthy Interiors criteria by obtaining the Greenhealth Approved seal. To obtain use of the seal products must have both BIFMA Level optional credit 7.4.4, and sign an attestation form confirming that they meet the Health Care Without Harm Healthy Interiors: Furnishings and Furniture Criteria.

Please visit Greenhealth Approved to learn more.

Chemical and Material Criteria

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.

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.

- *Guidance:*

New furniture and furnishings must be tested in accordance with ANSI/BIFMA Standard Method M7.1–2011. Comply with ANSI/BIFMA e3-2019 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.
Note: 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.

2. Per- and poly-fluorinated alkyl substances (PFAS)

- *Definition:*

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

a. Perfluoroalkyl substances: Substances for which all hydrogen atoms on all carbon atoms (except for carbons associated with functional groups) have been replaced by fluorine atoms
b. Polyfluoroalkyl substances: Substances for which all hydrogen atoms on at least one (but not all) carbon atoms have been replaced by fluorine atoms.
c. Fluoropolymers: Carbon-only polymer backbone with fluorine atoms directly bound.
d. Perfluoropolyethers: Carbon and oxygen polymer backbone with fluorine atoms directly bound to carbon atoms.
e. Side-chain fluorinated polymers: Variable composition non-fluorinated polymer backbone with fluorinated side chains.

- *Guidance:*

The product does not contain per- or poly-fluorinated alkyl substances as part of stain or water repellent treatments.

No intentionally added fluorine compounds are allowed. Initial screening for the presence or absence of per- or poly-fluorinated alkyl substances can be accomplished by measuring total fluorine content. Total fluorine must be less than 100 ppm.

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.

- *Guidance:*

The product does not contain PVC.

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

4. Antimicrobials

- *Definition:*

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

- *Guidance:*

The product does not contain any added antimicrobials. Triclosan and triclocarban are explicitly prohibited for all uses.

- *Exemptions:*

    - Exemption 1: Antimicrobials added to materials or products for the sole purpose of preserving the product are exempt except triclosan and triclocarban.

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.

5. Flame Retardants

- *Definition:*

Flame retardants are chemicals or chemical compounds for which their functional use is to resist or inhibit the spread of fire, including, but not limited to, halogenated,

phosphorous-based, nitrogen-based, nanoscale, and polymeric and reactive flame retardants; flame retardant chemicals listed as "designated chemicals" pursuant to Section 105440 of the California Health and Safety Code; and any chemical or chemical compound for which "flame retardant" appears on the substance Safety Data Sheet (SDS) pursuant to Section 1910.1200(g) of Title 29 of the Code of Federal Regulations.

- *Guidance:*

Products supplied must contain less than 1000 ppm of flame retardants by weight of the homogeneous[1] material where code permits.

When flame retardant chemicals are necessary to meet code requirements:

- Halogenated flame retardants are explicitly prohibited.
- Inorganic ammonium phosphates (for example, diammonium phosphate, ammonium polyphosphate), other dehydrating minerals (for example aluminum hydroxide), or expandable graphite may be used.
- For other additive flame retardants: Each flame retardant chemical present at or above 1000 ppm by weight of the homogeneous material must be fully assessed using GreenScreen® v1.2 (or newer) and meet the criteria for Benchmark-3 or Benchmark-4 (i.e. no Benchmark 1 or 2 chemicals allowed).
- For reactive flame retardants: Materials should be evaluated as polymers according to the GreenScreen for Safer Chemicals Hazard Assessment Guidance for Chemicals, Polymers and Products, v1.4 or latest version, and be assigned a GreenScreen Benchmark score of Benchmark-3 or Benchmark-4.
- Alternatively, the flame retardant, prior to being reacted, can be evaluated using GreenScreen for Safer Chemicals Hazard Assessment Guidance for Chemicals, Polymers and Products, v1.4 or latest version, and be assigned a GreenScreen Benchmark score of Benchmark-3 or Benchmark-4.

[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 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.