

Related Healthy Interior Standards

Models for a safer furnishings policy include the Green Guide for Health Care (GGHC), version 2.2 Operations Section, Environmentally Preferable Purchasing (EP) Credit 3.6, Toxic Chemical Reduction: Furniture and Medical Furnishings (GGHC, 2008); and LEED for Healthcare - Materials and Resources (MR), Credit 5, Furnishings and Medical Furnishings (LEED, 2011).

1. Green Guide for Health Care (GGCH), Environmentally Preferable Purchasing (EP) Credit 3.6, Toxic Chemical Reduction: Furniture and Medical Furnishings

Intent: Promote the health of building occupants, reduce disposal costs and liability, and improve health for employees through purchasing least toxic products.

Health Issues: Every person is exposed to a complex mixture of hundreds of chemicals daily. This chemical exposure impacts every human in the world, including developing babies in the womb. Industrial societies are experiencing an increase in chronic diseases and conditions, including some cancers, birth defects, and infertility, asthma, and chemical sensitivities linked, in some instances, to environmental exposures. Toxic chemical exposure also jeopardizes the health of wildlife and ecosystems. Toxic chemicals, once in use, can disperse widely throughout the environment. Environmental monitoring shows that high hazard industrial chemicals and chemicals with unknown health effects are widely distributed in the environment and the food web and are measurable in humans at levels that, in some cases, are known to cause adverse health effects in humans, laboratory animals and wildlife.

Credit Goal: Ensure that 40% of the annual volume of all freestanding furniture and medical furnishings purchases based on cost meet the following criteria in Options 1 or 2 or 3 below. The dollar value of any individual product may be added towards the 40% total value if the product meets one of the following chemicals of concern criteria:

Option 1

Furniture components, textiles, finishes or dyes: product does not contain more than one of the following chemicals or materials:

- Added urea formaldehyde
- Heavy metals: lead, mercury, cadmium and antimony, except as allowed under the EU RoHS (Restriction of the Use of Certain Hazardous Substances of the European Union) Directive
- Hexavalent chromium in plated finishes, except as allowed under the EU RoHS (Restriction of the Use of Certain Hazardous Substances of the European Union) Directive
- Stain and non-stick treatments utilizing perfluorinated compounds (PFCs), including PFOA
- All other added halogenated compounds (chlorinated and fluorinated plastics and halogenated flame retardants as listed in EPP Credit 3), except PFCs

- Stain and non-stick treatments utilizing perfluorinated compounds (PFCs), including PFOA
- Added antimicrobial treatments containing halogenated compounds and/or silver nanoparticles.

Option 2

The product contains no more than two of the six above-listed categories of materials AND meets or exceeds the indoor air quality requirements of California's Special Environmental Requirements, Specifications Section 01350 (CA 01350), updated with California DHS Standard Practice CA/DHS/EHLB/R-174 as determined by independent laboratory testing and using the standard office building protocol parameters. The following programs currently utilize CA 01350 requirements for compliance for furniture:

- Scientific Certification Systems (SCS) Indoor Advantage Gold Environmental Certification Program; and
- GREENGUARD Product Emission Standard for Children & Schools.

Option 3

Sustainably Sourced Materials criteria (GGHC EP Credit 4.1-4.5) (salvaged, recycled, rapidly renewable, FSC certified wood, local manufacture).

Suggested Documentation

Prepare and maintain a matrix listing annual furniture purchases and indicating that the requisite amount of furniture complies with one of the three Credit Goals. Compile backup documentation such as invoices for a minimum one-year period.

Reference Standards

- California's Special Environmental Requirements, Specifications Section 01350, as specified in California Department of Health Services Standard Practice CA/DHS/EHLB/R-174, <http://www.ciwmb.ca.gov/GreenBuilding/Specs/Section01350/>.
- GREENGUARD Product Emission Standard For Children & Schools, <http://www.greenguard.org/>.
- Scientific Certification Systems (SCS), <http://www.scscertified.com/>.

Potential Technologies & Strategies

- Purchase refurbished furniture and medical furnishings meeting the Option 1 Credit Goal criteria for Toxic Chemical Reduction. Consider leasing and/or buy-back programs.
- Coordinate environmentally preferable purchasing practices with performance criteria for furniture and furnishings.
- Clean and inspect recycled and salvaged mattresses prior to use to verify they are free of allergens and contaminants.
- Identify opportunities to salvage and reuse furniture from existing inventory, and research potential used furniture suppliers.
- Salvage and reuse systems furniture and furnishings such as:
 - Case pieces

- Seating
- Filing systems
- Medical furnishings such as exam tables, stools, carts, etc.
- Consider contracting with local and/or regional furniture dealers for reused furniture and furniture recycling programs. Taking advantage of local resources helps save energy and other resources by reducing reshipping impacts and creation of new products using virgin material.
- Encourage manufacturers and suppliers to develop halogen-free alternatives. EPA and industry have acknowledged the hazards of halogenated stain treatments and are working to develop alternatives that meet or exceed performance standards.

2. LEED for Healthcare - Materials and Resources, Credit 5, Furnishings and Medical Furnishings

MR Credit 5: Furniture and Medical Furnishings 1–2 Points

Intent

Enhance the environmental and human health performance attributes associated with freestanding furniture* and medical furnishings products.

Requirements

A percentage of the total value of all freestanding furniture and medical furnishings, including mattresses, foams, panel fabrics, cubicle curtains, window coverings and other textiles used in the project (based on cost) must meet the criteria in one of the three options below. The minimum percentage for each point is as follows:

| <u>% of Total Material</u> | <u>Points</u> |
|-----------------------------------|----------------------|
| 30% | 1 |
| 40% | 2 |

Built-in casework and built-in millwork items must be included in the base building calculations, even if manufactured offsite. The dollar value of any individual product may be included in the total qualifying value if the product meets the criteria of any of the three options.

Option 1

All components of a furniture or medical furnishing assembly, including textiles, finishes and dyes, must contain less than 100 parts per million (ppm) of at least four of the five following chemical groups:

- Urea formaldehyde
- Heavy metals, including mercury, cadmium, lead, antimony
- Hexavalent chromium in plated finishes consistent with the Restriction of the Use of Certain Hazardous Substances of the European Union Directive (EU RoHS).
- Stain and non-stick treatments derived from Perfluorinated Compounds (PFCs), including Perfluorooctanoic Acid (PFOA).

- Added antimicrobial treatments.

If the total weight is more than five percent of the product by weight, furniture components must be included.

Option 2

All components of a furniture or medical furnishing assembly, including textiles, finishes and dyes, must contain less than 100 parts per million (ppm) of at least two of the five chemicals or materials listed in Option 1 AND the product must meet or exceed the indoor air quality requirements of California's Special Environmental Requirements, Specifications Section 01350, updated with California Department of Public Health Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers version 1.1 (CDPH/EHLB/M-500 Standard Method v1.1) as determined by independent laboratory testing and using the standard office building furniture protocol parameters.

The following programs currently utilize 01350 requirements for compliance for furniture:

- Scientific Certification Systems (SCS) Indoor Advantage Gold Environmental Certification Program
- GREENGUARD Product Emission Standard for Children & Schools

Option 3

All components of a furniture or medical furnishing assembly, including textiles, finishes and dyes, must meet the sustainably sourced materials criteria (salvaged, recycled, rapidly renewable, FSC-certified wood, local manufactured) of the MR Credit 3: Sustainably Sourced Materials and Products.

Note: Furniture and medical furnishings do not contribute to MR Credit 3.

*Furniture is defined as any fixtures, such as shelving, tables, storage units, chairs, desks or cabinets, purchased as a freestanding or modular unit, regardless of where the assembly takes place.