

FURNITURE & CARPETS

ECO-HEALTHY CHILD CARE® HELPS EARLY CHILDHOOD LEARNING ENVIRONMENTS TO BE AS HEALTHY, SAFE AND GREEN AS POSSIBLE BY REDUCING CHILDREN'S EXPOSURE TO TOXIC CHEMICALS.



HEALTH CONCERNS

Though wall-to-wall carpeting provides a soft surface to land on, it can trap pesticides, household cleaning residues, and lead-contaminated dust and dirt. Carpets, and the glues that hold carpet in place, as well as household furnishings also release harmful chemicals such as **formaldehyde, flame retardants, and per- and polyfluoroalkyl substances (PFAS)**

Children, especially younger children, spend most of their time near or on the ground and thus breathe in these chemicals, as well as the dirt, dust, and mildew that accumulate in carpets and household furniture.

Exposure to many of these substances can trigger asthma attacks.

Formaldehyde can be irritating to the eyes, skin, and mucous membranes. Off gassing (the release of chemicals into the air) can cause headaches; nausea; burning of the eyes, nose, and throat; skin rashes; and coughing. Exposure to formaldehyde may cause cancer. It is also a suspected neurological, reproductive, and liver toxicant.

Exposure to **flame retardants** is associated with:

- Endocrine and thyroid disruption. The endocrine system controls a wide range of bodily functions including growth and reproduction;
- Elevated cancer risk; and
- Developmental and reproductive harm.

Health effects from exposure to **per- and polyfluoroalkyl substances (PFAS)** include kidney and testicular cancer, thyroid disruption, and obesity.



FORMALDEHYDE

Formaldehyde is commonly found in indoor air. In child care facilities, levels are often higher than are safe for health. **It is a flammable, colorless gas that has a pungent odor.** Off-gassing is highest from furniture and flooring for the first five years after products containing formaldehyde are made and/or installed. **People are exposed by breathing air-containing formaldehyde.**

Formaldehyde can be found in:

- Wrinkle-free (permanent press) materials including: clothing, sheets and draperies.
- Resins (glue) in engineered wood (particle board and plywood) furniture.
- Paint products
- Personal care products
- Household cleaners
- Certain flooring such PVC, vinyl or laminate
- Glue used to adhere carpets and flooring to the subfloor
- Wood-burning stoves
- Cigarette smoke
- Car exhaust

FLAME RETARDANTS

Other indoor pollutants are **organophosphate flame retardants which replaced polybrominated diphenyl ethers (PBDEs) when they were phased out (in 2004) of use in furniture foam, electronics, and children's products.** Flame retardants are continuously migrating out of products like nap mats and ending up in household dust. **When dust contaminated with flame retardants gets on babies' or toddlers' hands, they can end up consuming these hazardous chemicals.** Young children can have 3 times the flame retardant levels of adults.

Flame retardants can be found in:

- Electronics (TV/Computers)
- Plastics
- Furniture Foam
- Carpet Padding
- Building Materials
- Children's products including nap mats

Flame retardant chemicals aren't effective at reducing fire hazards in many products. These chemicals are added to meet flammability regulations but studies show they delay fire ignition only a few seconds, and can increase smoke toxicity.

PFAS

These substances migrate out of products and end up in our air and water. You can be **exposed via ingestion of contaminated materials, food (including breast milk), and in occupational settings.**

PFAS can be found in:

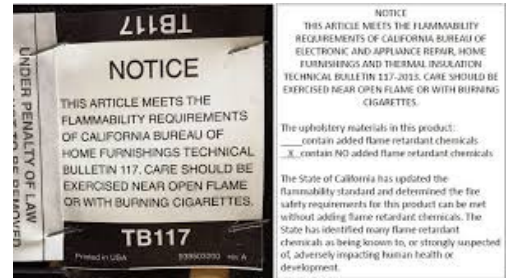
- Carpets/rugs
- Carpet Cleaning Products
- Upholstered Furniture (couches/chairs)
- Adhesives and Sealants

TIPS FOR REDUCING EXPOSURES TO FORMALDEHYDE/FLAME RETARDANTS/PFAS

- Have children **wash their hands** frequently with soap and water.
- **Ventilate** often, and especially while cleaning to increase airflow.
- **Vacuum area rugs daily** with a high-efficiency particulate air (HEPA) filter vacuum cleaner and clean at least twice a year (or as needed) using fragrance-free, 3rd party certified cleaners.
- **Keep dust levels down** by damp dusting and mopping.
- Place a **doormat** at all outside entrances and encourage the wiping of shoes before entering, or have people remove shoes prior to going indoors.
- Ensure **furniture, carpet padding, nap mats, crib mattresses, and other foam items are in good condition.** Ripped foam items should be disposed of.
- When purchasing furniture or renovating, **choose solid wood (new or used) products** and avoid pressed or composite wood items.
- If you must use products with composite wood **choose those with No Added Formaldehyde (NAF) or Ultra-Low-Emitting Formaldehyde (ULEF)** designations.

TIPS FOR REDUCING EXPOSURES CONT.

- **Before buying upholstered furniture, verify that flame retardants have not been added.** Labels on furniture made after January 1, 2015, should indicate whether flame retardants are present. **Look for the TB117-2013 label.**



- If the furniture does not have a label, **choose new items stuffed with polyester, down, wool or cotton.** These are unlikely to contain flame retardants.
- **Avoid permanently installed wall-to-wall carpeting** where children are present.
- When renovating, **choose safer flooring options such as solid wood or linoleum** and avoid wall-to-wall carpets, laminate, and vinyl flooring.
- **Choose area rugs that are free of stain repellents and harmful fluorinated chemicals** (e.g. cotton, hemp and wool).



*NOTE: Ecologo criteria do not specifically prohibit the use of all quats (quaternary ammonium compounds) in disinfectants. These chemicals increasingly are considered to exacerbate asthma.

FURNITURE & CARPETS RESOURCES

EHCC FAQs: Flooring and Carpeting
Flooring and Carpet Factsheet

Environmental Protection Agency (EPA): Formaldehyde
<https://www.epa.gov/formaldehyde>

Healthy Building Network, Product Guidance
<https://healthybuilding.net/products>

Green Science Policy Institute- Flame Retardants in Furniture
www.greensciencepolicy.org/topics/furniture/

Center for Environmental Health-Carpeting and Flooring
www.ceh.org/products/carpeting-and-flooring/



FOR MORE INFORMATION

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