

## What Is the Design for the Environment Program?

EPA's Design for the Environment (DfE) Program is one of EPA's most effective, results-oriented voluntary programs. It champions risk reduction through pollution prevention and bases its "license to operate" on applying Agency expertise and technical tools.



Designing for the environment is incorporating environmental considerations into business decision making. The EPA DfE program collaborates with industry sectors to help businesses design or redesign products, processes and management systems that are cleaner, more cost-effective, and safer for the worker and the public.



## How Do I Get Involved with the Partnership?

To get involved with the partnership, please call:

- Kathleen Vokes, of the EPA DfE program, at 202-564-9910,
- Dick Driscoll at BIFMA at 616-285-3963, or
- Bill Perdue at AFMA at 336-884-5000 x117, or
- Mark Buczek at AFSC at 202-530-4590, or
- Lauren Heine at GreenBlue at 434-817-1424 x 305.



[www.epa.gov/dfe](http://www.epa.gov/dfe)



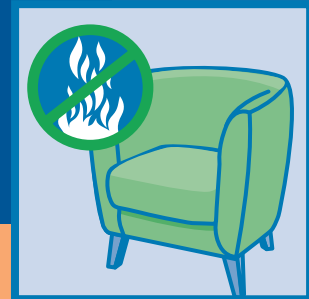
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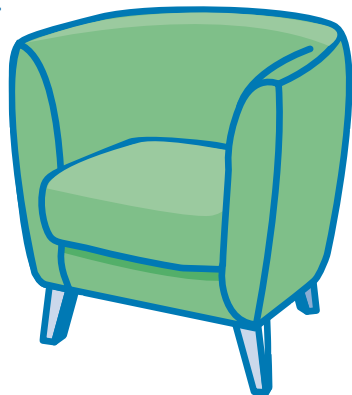


## Environmentally Preferable Approaches for Achieving Furniture Fire Safety Standards



# Environmentally Preferable Approaches for Achieving Furniture Fire Safety Standards

This project is a partnership between the U.S. Environmental Protection Agency's Design for the Environment (DfE) Program and the following stakeholders: the American Fire Safety Council (AFSC), the American Furniture Manufacturers Association (AFMA), the Business and Institutional Furniture Manufacturers Association (BIFMA), the Consumer Product Safety Commission (CPSC), and GreenBlue. The partnership will identify environmentally sound solutions for meeting current and future furniture fire safety requirements.



## What Are the Project Goals and Activities?

The partners in this project have identified short-term and long-term goals to facilitate and inform industry decision making on environmentally sound solutions to fire safety.

### Short-term Goal

- Provide up-to-date information on flame retardants used in foam and fabric, focusing initially on alternatives to pentabromodiphenyl ether (pentaBDE), which is commonly used in foam, and secondly on flame retardants used in textiles.

### Long-term Goals

- Identify environmentally preferable approaches for designing furniture that meets fire safety standards.
- Develop toxicological information on flame-retardant chemicals to affirm short-term decisions.

### Key Activities

#### *Green Chemistry Approaches*

- Identify and evaluate existing chemical substitutes for foam and fabric flame retardants. May also look at batting and other filling materials as appropriate.
- Target research needs to encourage the design and development of environmentally preferable flame retardant technologies.

#### *Green Engineering Approaches*

- Investigate barrier technologies and alternative construction techniques.
- Investigate alternative formulation of foams.
- Develop a targeted DfE innovation challenge to identify chemical and non-chemical solutions.

The partnership will look not only at ways chemicals can help prevent fires, but also at inherently flame-retardant materials and designs. Cost, functionality, environmental/human health, and fire safety attributes will be factored in.

## Why is the Partnership Needed Now?

The U.S. furniture industry needs more information on the environmental profile of flame retardant chemicals to move toward the use of environmentally preferable flame retardants.

PentaBDE has been the primary flame retardant for foam in residential furniture in the U.S. This chemical saves lives, but there is growing concern over its environmental effects. In response, the sole U.S. manufacturer of pentaBDE is voluntarily phasing out production by December 31, 2004.

At the same time, the need for reliable cost-effective flame retardant chemicals and flame retardancy methods is increasing in response to revised California laws or a potential federal flammability standard.

This partnership will provide manufacturers with information on existing and emerging flame retardants and set criteria to influence the future design of flame retardants.

“AFMA understands and supports the long-range nature of this project and encourages EPA to remain engaged with private sector stakeholders to develop environmentally sound solutions to fire safety.”

—American Furniture Manufacturers Association  
[www.afma4u.org](http://www.afma4u.org)

“BIFMA is committed to promoting sustainable work environments and business practices based on sound economics, environmental protection, and social responsibility.”

—Business and Institutional Furniture Manufacturers Association  
[www.bifma.org](http://www.bifma.org)

“AFSC is committed to improving fire safety standards and saving lives...We expect this partnership to lead to the implementation of safe and environmentally sound approaches to fire safety.”

—American Fire Safety Council  
[www.firesafetycouncil.org](http://www.firesafetycouncil.org)

“GreenBlue is attracted to this partnership because of the rare opportunity to reconceive design criteria for flame retardant products.”

—GreenBlue  
[www.greenblue.org](http://www.greenblue.org)