AVOIDING CHEMICAL FLAME RETARDANTS ON CAMPUS

Recent changes to the Massachusetts fire safety code now allow Harvard's Schools and departments to reduce health risk by purchasing furniture that meets strict fire safety standards without the use of harmful chemical flame retardants.

In November 2015, Harvard became the first university to sign a national pledge stating a preference for purchasing flame retardant-free furniture. Other signatories to the pledge include Kaiser Permanente, Facebook, Blue Cross Blue Shield Massachusetts, and Autodesk. The Office for Sustainability is partnering with Harvard capital project and planning teams, Strategic Procurement, and Environmental Health and Safety to identify and source chemical flame retardant-free furniture across the University, and in accordance with regulations.

Harvard's Sustainability Plan, created with faculty, students, and staff, makes a specific commitment to identifying and reducing chemicals of concern on campus, both to eliminate risks to our vulnerable populations and to enhance the health and well-being of our community. University-wide Green Building Standards include healthy material requirements for the disclosure of the health and environmental impact of products that are used on campus.

The Office for Sustainability has been collaborating with Harvard T.H. Chan School of Public Health researchers and the Silent Spring Institute for several years to better understand the prevalence of harmful chemicals on campus. Faculty across Harvard's Schools, including Philippe Grandjean, Joseph Allen, Jack Spengler, and Elsie Sunderland, are generating new discoveries about the impact of harmful chemicals on public health and the built environment.

"When the science is this clear on the potential for harmful effects, and safe alternatives exist, it is time to take action to reduce exposure to flame retardant chemicals. This is an important, public health-promoting goal for our University."

–JOE ALLEN, Assistant Professor of Exposure Assessment Science at Harvard T.H. Chan School of Public Health

BY SIGNING THE

PURCHASER PLEDGE

HARVARD COMMITS TO THE FOLLOWING MEASURES:

- ✓ Communicating with our preferred vendors and ensuring they understand the University's preference for specifying and procuring fire-safe products that are free of chemical flame retardants.
- ✓ Increasing our purchase and specification of furniture products free of chemical flame retardants. Products that are clearly identified as not containing flame retardant chemicals will be preferred.

HARVARD Financial Administration STRATEGIC PROCUREMENT

HARVARD T.H. CHAN SCHOOL OF PUBLIC HEALTH Center for Health and the Global Environment

HARVARD UNIVERSITY | Sustainability

WHAT'S WRONG WITH FLAME RETARDANTS?

Flame retardants are chemical compounds that were originally added to the foam in furniture to meet an outdated fire safety standard. However, studies by the U.S. Consumer Product Safety Commission (CPSC) and others have shown that eliminating the use of chemical flame retardants does not weaken fire safety and that exposure to these chemicals is associated with harmful health effects. As a result, Massachusetts' strict fire safety codes no longer require manufacturers to use flame retardants in their products in most cases.

WHAT ARE THE HEALTH EFFECTS OF FLAME RETARDANTS?

Flame retardants escape from products and settle into dust that can be ingested or inhaled. According to the Silent Spring Institute, Americans have some of the highest measured levels of flame retardants in their blood in the world. In 2003, their researchers reported that levels of flame retardants in U.S. homes were ten times higher than in Europe. These harmful chemicals are linked to cancer, reproductive harm, reduced IQ, developmental delays, and obesity.

HOW TO REDUCE YOUR EXPOSURE

TO CHEMICAL FLAME RETARDANTS

According to the Center for Environmental Health, you can reduce your exposure to flame retardants in dust at home and in the office by washing your hands often, especially before eating, and regularly wiping down your desk and other surfaces with a wet sponge or towel. You can also open your windows frequently for good ventilation (if possible), and by vacuuming regularly, ideally with a HEPA (high-efficiency particulate arrestance) filter.

HOW HAVE REGULATIONS CHANGED?

In response to the widely researched health and safety effects of flame retardants, Massachusetts' strict fire safety codes were updated on January 1, 2015, to no longer require the use of these chemicals in furniture products for most public spaces (changes to the state fire code primarily apply to Cambridge and other non-Boston locations). Effective July 2016, Boston's fire safety codes will be updated and aligned with the state's.

The change to the Massachusetts code is based on a new standard set by California called Technical Bulletin 117-2013 (TB 117-2013) that addresses the outside cover fabric, the place where fires actually start. The old standard focused on the inner foam. The new standard can now be met without the addition of chemical flame retardants, through the use of smolder resistant fabrics. However, some products may still include a small amount of flame retardants, so it is important for purchasers to confirm the furniture selected is flame retardant-free (inner foam and fabrics).

FLAME RETARDANTS

are one of the six classes of chemicals of concern that contain many of the harmful substances found in everyday products. The most harmful flame retardant chemicals—organohalogen and organophosphorous—which may be found in furniture, can show the following properties of concern:

PERSISTENT: Do not break down into safer chemicals in the environment.

LONG-RANGE TRANSPORT: Travel far from source of release and are distributed around the world.

BIO-ACCUMULATIVE: Build up in people and animals, becoming most concentrated at the top of the food chain.

HARMFUL TO HEALTH: Often have long-term (chronic) rather than immediate health effects.

(Source: Green Science Policy Institute)

ARE SAFER, COST-EFFECTIVE PRODUCTS AVAILABLE?

Major manufacturers and retailers are already making and offering furniture without flame retardants, often at a lower cost. Retailers including Ikea, Wal-Mart, Crate and Barrel, Room & Board, Pottery Barn, and West Elm have all asked their manufacturers to eliminate flame retardants from their products, and are in the process of introducing these new options to the market.

A survey conducted by the Office for Sustainability and Strategic Procurement found that of the 28 manufacturers that provide furniture through Harvard's preferred vendors, 26 do not use flame retardants in all or some of their furniture products; all 28 are working to offer some flame retardant-free products. Of those surveyed, at least 15 reported that all of their products are free of flame retardants, and this number is expected to increase to 20 manufacturers by December 2015.

HEALTHY FURNITURE BUYER'S GUIDE

BUY FLAME RETARDANT-FREE FURNITURE

The best way to minimize risk is to choose flame retardant-free furniture for your next capital project, renovation, or office furniture purchase.

The Sustainability and Energy Management Council, Office for Sustainability, and Strategic Procurement recommend that the Harvard community specify and purchase cost-competitive furniture that is free of flame retardants and meets all new applicable fire safety regulations and flammability standards.

PROJECT MANAGERS

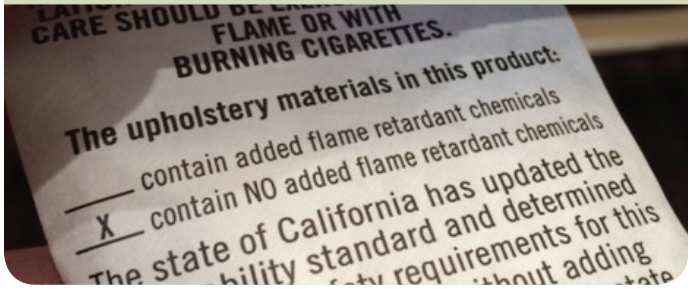
- ✓ Add language to your project's contract and specs stating you would like to purchase furniture free of chemical flame retardants that meets the TB117-2013 standard.
- ✓ Clearly communicate with all vendors that Harvard has a preference for products free of chemical flame retardants.
- ✓ Confirm that the project's code consultant clearly understands Harvard's preference for chemical flame retardant-free furniture when allowed by the updated fire safety code.

PURCHASERS

- ✓ Confirm with your retailer or manufacturer that chemical flame retardants have NOT been added to the product.
- ✓ Confirm that the product has a TB117-2013 label that says it does not contain flame retardant chemicals.
- ✓ Avoid any products with a TB117 or TB133 label.

BUYING TIPS:

- Check the label located under the product or seat cushion to confirm the upholstered material includes no added flame retardants.
- Because some fabrics may still contain chemicals, confirm with your retailer or manufacturer that flame retardants have NOT been added to the product (fabric or foam).
- In order to obtain fully flame retardant-free products, confirm with your manufacturer that flame retardants were not added to any plastic parts.



"Fire retardant foams did not offer a practically significant greater level of open flame safety than did the untreated foams."

–Consumer Product Safety Commission

EDUCATE YOURSELF AND YOUR COMMUNITY

Visit **green.harvard.edu/chemicalsofconcern** to access educational resources, research highlights, and additional information on how you can reduce exposure to flame retardants at home or in the office.

Contact the **Office for Sustainability** for Harvard-specific guidance, sample technical specifications, and assistance in purchasing flame retardant-free furniture at **617.495.3822**, **green.harvard.edu**, or **sustainability@harvard.edu**.

FLAME RETARDANT-FREE FURNITURE OPTIONS FROM HARVARD PREFERRED VENDORS

Harvard's preferred furniture vendors and manufacturers were surveyed in March 2015 on the use of flame retardant chemicals in their products. Below is a list of survey results, detailing the availability of flame retardant-free products from our vendors. This list will be updated in early 2016. For a complete list of national furniture manufacturers that are selling flame retardant-free furniture, visit: green.harvard.edu/chemicalsofconcern.

Preferred Vendor	Manufacturer	Products Without Chemical Flame Retardants (FR) In all cases, specify NO FR & TB 117-2013 to ensure compliance.
CREATIVE OFFICE PAVILLION	Allermuir	All upholstered products.
	Bernhardt	No products. Goal of having information and processes in place within 6-8 months.
	Bright Chair Company	All upholstered products.
	Chair Master	All upholstered products (though foam may have FR).
	Eustis Chair	All upholstered products.
	Geiger	All upholstered products except for Echohide textile (which will be phased out by 2016). **Specify no Echohide**.
	Gunlocke	Some products.
	Harden	Goal to be 100% FR Free by March 1, 2015.
	Hightower	Some products (only received from RedThread, see below).
	Herman Miller	FR-free now: Equa2, Ergon3, Setu, Aside, Sayl side, Public, Celeste and Swoop. Swoop label change in process. By March 1: Caper multitask chair, By May 1: Aeron, Mirra 2, Celle, Sayl, and Embody.
	Humanscale	All upholstered products (customers can request FRs added).
	Jack Cartwright Inc.	All products can be made without flame retardants. Clients choose textiles. FRs eliminated from all Cartwright products by March 1, 2015.
	Keilhauer	All standard upholstered products.
	KI, Inc	100-700 Series Folding Chairs, AerDyn Guest Chair, Affina Collection, Apply Seating, Arissa Collection, Avail Task Seating, Bantam Guest Seating, Cinturon Task Seating, Cody Lounge Seating, Concerto Auditorium Seating, Dorsal Stack Chair, Engage Seating, Exam Room Stools, Flex Collection, Gate One Seating, Grazie Seating, Hub Seating, Impress Task Seating, Intellect Wave Seating, Jessa Lounge Seating, Jubi Chair, Kismet Seating, Kurv Benches, Lancaster Auditorium Seating, LaResta Day Bed, Learn2 Seating, LogixSeating, Lyra Collection, Maestro Chair, Matrix Chair, Mesa Lounge Seating, Mesa Task Chair, MyWay Lounge Seating, Neena Bench, Perry Seating, Perth Collection, Pilot Task Chair, Piretti Stack Chair, Promenade Seating, Rapture Chair, Relax Lounge Seating, Rose Chair, Sela Lounge Collection, Silhouette Chair, Soltice Collection, Strive Seating, Tea Cup Lounge Seating, Three Collection, Torsion Chair, Torsion Air Chair, Torsion On The Go Chair, Versa Basic, Standard, Conference, and XL Chairs.
	Lord's Upholstery	All upholstered products.
	South Shore Upholstery	All CAL TB 117 upholstered products.
	Vitra	Goal of all upholstered products by year end 2015.
REDTHREAD	9 to 5	All upholstered products.
	Allermuir	Allermuir Clipper, Ecoflex, Evolve, Circo, Rhapsody, Sprint, Symmetry, Zenith, Ad-lib, Elios, Trillipse.
	Bernhardt	No products. Goal of having information and processes in place within 6-8 months.
	BioFitEnfineered Products	Some products but no timeline for full line.
	Cumberland Furniture	All upholstered products.
	Dauphin	All upholstered products.
	Davis	Davis Upholstered products do not have chemical flame retardants. They changed their foam in March 2015 and eliminated TB117 foam, therefore Davis no longer has chemical flame retardants in their foam.
	HBF-Gunlocke	Some products.
	Hightower	All upholstered products (though products that comply with TB133 have FRs in the upholstery fabric).
	Izzy and Harter	All Izzy and Harter upholstered products constructed of molded foam are without chemical flame retardants. The remaining products constructed of cut foam will migrate to a flame-retardant free formulation Q3 of 2015.
	Keilhauer	All standard upholstered products.
	KI, Inc	The majority of KI products can be made to meet TB 117-2013 and be made flame retardant-free. Products made for TB 117-2013 are made to also meet California requirements of SB 1019 and are labeled to note if the product does contain FRs in the fabric or foam.
	National Office Furniture (Kimball)	Some products.
	Steelcase, Coalesse, Turnstone	Qivi, Move, Cachet, and Max Stacker Chairs (excluding TB-133 versions of these chairs) Goal of all upholstered furniture flame retardant free by June 1, 2015.
MODUFORM	Moduform	Some products.
NEW ENGLAND WOODCRAFT	New England Woodcraft	Some products.