

Fire Safety - Textile Products

Fire is the leading cause of property damage worldwide – billions of dollars and tens of thousands of deaths or injuries every year.

When designing an interior space, function, aesthetic quality, customer vision, and budget constraints are paramount. However, fire prevention is a concern for architects, builders, and inspection teams as well as designers – so careful planning is required to minimize potential problems in the later stages of a project.



Commercial Settings:

Almost all fabrics are naturally flammable. Textiles of varying weights, fiber content, and characteristics are used in window treatments, wall coverings, furnishings, and decorations, while ignition sources ranging from candles and cigarettes to stage lighting are everywhere. With an enormous range of variables, the inevitable question is whether a product will pass inspection.

Code Compliance

Fire codes in MA and nationwide are migrating to NFPA 1. As a leader in fire prevention, Boston will enforce additional measures. These codes depend heavily upon location, building type, intended use, and numerous other factors. For many people, it is a confusing process involving various standards, tests, analytical data, and documentation. Below is short list of common fire codes associated with textile products.

| Decorations, Curtains, Draperies, Other Window Treatments | | Recertification |
|---|--|---------------------|
| Life Safety NFPA 101 (Draperies), NFPA-701, BFD IX-1 | Small-scale test (fabric swatch sample) | Annual |
| Upholstery | | |
| Cal TB 117, NFPA 260, 527 CMR 29.00 | Small scale test (individual components) - not accepted for initial permit | Upon reupholstering |
| Cal TB 133, BFD IX-10, NFPA 261, ASTM E 1537, 527 CMR 21.00 | Full-scale test (components are assembled to build finished product mock-up) | Upon reupholstering |
| Wall coverings | | |
| ASTM E 84, NFPA 265, | Full-scale fire test - fabric, vinyl, or other textiles | No |
| NFPA 286 | Non-textile wall covering - i.e. bamboo, leather, cork | No |

DFS Department of Fire Services
BFD Boston Fire Department
NFPA National Fire Protection Agency
CMR Code of MA Regulations

527 CMR Fire Safety Code used by DFS
ASTM American Society for Testing and Materials
Cal (TB) California Bureau of Home Furnishings (Technical Bulletin)

Residential settings:

Fire codes are more limited within residential settings; HOWEVER, this does not imply a lower fire risk or potential for devastating damage.

- Underwriters Laboratory demonstrated flash-over rates have decreased from 30 minutes to **less than 5 minutes**... only minutes for a family to escape and firefighters to respond before a small situation grows dire and life threatening
- Boston Globe, March 2014 article highlighted the conflict of Health Risk vs. Fire Prevention and the imperative need for (and use of) non-toxic flame retardants

(over ➡)

A Simple Step to a Simple Solution

Toxicity, corrosion, pollution, banned by environmental and government agencies...

...fire prevention, lives and property saved, valuable time for escape and first responders.

Flame retardants have a bad history of trading one problem for another.

Flame Retardants... safe and effective

CODEpliance only uses products that provide exceptional protection without environmental or health dangers.

| | |
|---|---|
| <i>Non-toxic, food-grade components:</i> | Safe for use in residential, commercial, and industrial applications; baby nursery through high-traffic entertainment venue |
| <i>Biodegradable, environmentally-friendly:</i> | Harmless to surrounding wildlife, and foliage; can be applied to live plants near home |
| <i>Confirmed results:</i> | Class A rating for both Flame Spread and Smoke Developed Index; mitigates toxic gases released with exposure to heat |
| <i>Fabric compatibility:</i> | Formulated for synthetic, natural, and blends; sheers through heavy-weight upholstery materials |
| <i>Difficult Surfaces:</i> | Effective on wood, thatch, bamboo, rubber foam, cork, paper, and exterior-grade fabrics (umbrellas, awnings) |
| <i>Broad customer base:</i> | Includes restaurants, hotels, day-cares, schools, hospitals, assisted-living facilities, and personal residences |
| <i>Certified Lab approval:</i> | UL, NFPA, ASTM standards State agencies CA, NY and MA Office of Public Safety |

- * Mill-treated fabrics should be renewed after 3-5 years to maintain fire rating.
- * Inherently flame resistant fabrics can fail inspection after time - UV light, humidity, maintenance, and wear compromise resistance; accumulated dirt and dust provide accelerants for flame spread.

Documentation

Tests, treatments, approvals, site schematics, and more - this creates a complex hardcopy and electronic paper-trail (product info, samples, results, certifications, permits, etc). A core aspect of the CODEpliance approach is to coordinate each step and digitally capture all of the information along the way, so it can be quickly retrieved for future inspections or alteration purposes.

Treatment Options

CODEpliance serves a variety of industries' flame retardant needs; flexibility and options are as important as products and services. Below is a process example, easily tailored to fit any business model or clientele base.

