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California to Unveil New Flammability Standard to Avoid Chemicals in Furniture

The new rules would cut down on the use of flame retardants that have been linked to human health effects

By Brett Israel and Environmental Health News | Friday, February 8, 2013

California unveiled a proposal on Friday that would transform its controversial fire safety standards by dropping a requirement that has led to widespread use of flame retardants in U.S. couches and other furniture.

Flame retardants are found in nearly all couches in the United States. California's new flammability standard could change that.
Image: Flickr/Sean Dreilinger

The current standard, adopted in the 1970s, mandates that foam used in furniture cushions must withstand a 12-second exposure to a small, open flame. As a result, manufacturers throughout the nation have been adding brominated or chlorinated chemicals to the foam to slow the spread of flames.

Under the direction of Gov. Jerry Brown, a state agency released a new draft rule on Friday morning that will eliminate the open-flame test. Instead, state officials say they will require a smolder-only test, which manufacturers could meet without flame retardants while still preventing fires.

Over the past several years, concern about the chemicals has mounted as evidence points to an array of potential health effects, including reduced IQs, attention problems and other neurological effects in children exposed in the womb or during infancy. The chemicals have been building up in human bodies, including breast milk, around the world.

The new draft is in response to a directive issued by Brown to improve fire safety while reducing exposure to toxic chemicals. Smoldering objects such as cigarettes, heaters and extension cords, rather than open flames, are the biggest source of household fires.

"This [proposal] will provide consumers with a more realistic approach to fire safety in addition to reducing the upholstered furniture's smolder ignition potential," according to the state's overview of the proposed changes. "As an added benefit, this regulatory proposal significantly reduces or eliminates manufacturers' reliance on materials treated with flame retardant chemicals. It is the Bureau's understanding that many manufacturers, who are no longer compelled to make materials open-flame resistant, will no longer use flame retardant chemicals in their products. Manufacturers would instead be able to purchase and use the less expensive non-flame retardant materials therefore saving in material costs."

State Sen. Mark Leno (D-San Francisco) called the administration's move "enormous" given the Legislature's "inability due to the power of the chemical industry to move in this direction." He sponsored a bill to curb the use of flame retardant chemicals in consumer

products, but it died in committee.

Chemical companies have said that flame retardants are safe and that they are necessary to prevent dangerous fires from igniting furniture.

“Regrettably, if this proposed regulation moves forward, it will reverse a fire safety standard that has provided an important layer of protection to Californians for over 35 years," said a spokesperson from the American Chemistry Council, an industry group. "Since the National Fire Protection Association reports that open flame sources are still a major cause of upholstered furniture fires, regulators in California should propose a standard that addresses this fire safety risk."

The proposal will go through a six-week public comment period before a final standard is adopted by the state agency.

Because California is such a large market for furniture, the original standard, known as Technical Bulletin 117 (TB 117), created a de facto standard across the United States that led to use of flame retardants in most furniture cushions.

The new tests would involve mockups of cushions rather than tests of just foam. This would prompt the use of barrier materials and smolder-proof cover fabrics to prevent furniture from igniting. Similar materials already are used in Europe.

The changes will “address upholstery-covered fabric and the interaction between materials in a couch the way it would occur in a real-world fire," said Russ Heimerich, spokesman for California's department of Consumer Affairs, which houses the Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation that will release the new draft.

He said it "fulfills Gov. Brown's vision with continuing to improve fire safety while reducing the use of flame retardant chemicals. We think this does as good or better as previous standards to ensure furniture won't burn readily."

About 85 percent of furniture on the market today already meets an upholstery smolder standard, according to a report from the Consumer Product Safety Commission that proposed a similar smolder standard in 2008 [PDF].

"These types of upholstery are not typically treated with flame retardants," said Heather Stapleton, who researches flame retardants at Duke University. "It should reduce our everyday exposure to flame retardant chemicals if it passes."

Arlene Blum, an environmental chemist with the University of California, Berkeley, has campaigned for years against flame retardants. She said she was "cautiously optimistic" about the new proposal.

The legacy of the old standard, however, will be felt for years since many people keep couches and other furniture for decades.

"Even with new regulations in place we still have the ongoing impact of these bio-pervasive and bioaccumulating chemicals, which will be with us for decades," Leno said. "This is only step one. It will hopefully stop the bleeding."

Because flame retardants are mixed into consumer products, rather than chemically bound, they can leach out and stick to dust particles that people can inhale.

A recent study found them in nearly all couches tested. In couches purchased before 2005, three out of every four contained flame retardants. For newer couches, 94 percent contained them, nearly all next-generation compounds with little known about their potential health effects.

Before 2005, a brominated flame retardant known as penta was used in most U.S. furniture. When it was banned because it was accumulating in people and wildlife around the world, newer chemicals came onto the market to help furniture meet TB 117. Scientists

have struggled to keep pace with studying their health risks.

Children and pregnant women are particularly vulnerable, especially in California. California children have some of the world's highest-measured levels of flame retardants in their bodies. An ongoing study of California children has found that exposure during pregnancy or early childhood may lead to children with poorer attention, motor skills and IQ scores.

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