



When 'safety' poses a threat

Citing risk to firefighters from carcinogenic fumes, Minnesota legislators pass bill banning four common fire-retardant chemicals

by Minnesota Rep. Jeff Howe (rep.jeff.howe@house.mn)

Some 25 years ago, I joined fellow firefighters who advocated applying flame-retardant chemicals to furniture and other household products to help slow the spread of fire.

We strongly believed we could limit the damage caused by fires and protect people by reducing the speed by which household items burned, thus giving occupants more egress time and providing firefighters more time to arrive at a site before the fire went to flashover. But we have learned over time an unintended consequence — the chemicals designed to suppress flames create smoke with dangerously highly carcinogenic toxins.

Fast forward to this year when, as a member of the Minnesota House of Representatives, I was honored to carry legislation that bans some of those chemicals in our state.

SF 1215/HF 1100, signed into law in May, prohibits four flame-retardant chemicals in upholstered furniture and children's products manufactured after July 2018. It is one of the most proactive laws in the nation.

Despite our best intentions back in the 1980s, scientists simply didn't know what they know today about the toxicity of flame-retardant chemicals.

We now know that the same flame retardants being used in an attempt to save lives often have had detrimental effects — especially among children and firefighters — by creating a poisonous environment. And the actual benefits of



The application of flame-retardant chemicals to furniture and other household items was once seen as a way to limit damage caused by fires and even save lives in the process. But with studies increasingly showing that when burned, these chemicals emit carcinogenic fumes which endanger the lives of firefighters, efforts are underway worldwide — including a recently enacted law in Minnesota — to limit their use.

Once thought beneficial, flame retardants increasingly seen as dangerous

Decades ago, it was thought that applying flame-retardant chemicals to household items such as upholstered furniture and children's bedding products could reduce the speed at which a fire could spread, limiting damage and saving lives.

But studies increasingly show that not only are these substances not as effective as first thought in reducing fire risks, they can also endanger the health of consumers who use the chemically treated products — including carpets, baby strollers, plastic TV casings, computers and foam insulation — in their homes.

According to Susan Shaw, a professor of public health at the State University of New York, flame retardants are "associated with a wide range of well-documented, serious health effects in people and animals." And the wider use of these chemicals in the United States, she says, means that Americans have 10 to 40 times higher levels of them in their bodies than do Europeans or Asians.

In addition, studies have shown that when burned, these products emit highly toxic and even carcinogenic gases and soot that can endanger the lives of firefighters who battle home blazes.

The various dangers posed by flame retardants have generated efforts worldwide to ban or limit their use.

In Minnesota, SF 1215/HF 1100 (signed into law in May) bans four of the most common of these chemicals:

- TDCPP (tris(1,3-dichloro-2-propyl)phosphate), often used in foam contained in upholstered furniture;
- decabromodiphenyl ether, widely used in many materials, including carpets and fabrics;
- hexabromocyclododecane, used in applications such as insulating foams, textile coatings and office equipment; and
- TCEP (tris(2-chloroethyl)phosphate), used in upholstery, baby furniture and many other household items.

The original version of the bill would have banned six other flame-retardant chemicals. However, some opponents say there is insufficient proof of the chemicals' danger to firefighters, and representatives of the chemical industry and the state Chamber of Commerce opposed such a wide ban, saying the chemicals are effective in fire prevention. The chemicals not banned by the final bill were tetrabromobisphenol A; antimony; tetrabromo phthalate (TBPH); tetrabromo benzoate; chlorinated paraffins; and tris(1-chloro-2-propyl)phosphate (TCPP).

flame-retardant materials slowing the spread of fire have proved not to be worth the risks.

When flame retardants burn, studies show, they create 10 times as much carbon monoxide gas as non-treated items, and 80 to 100 times as much carcinogen-laden soot.

These carcinogens are readily absorbed by people in the vicinity. This makes firefighters particularly susceptible since their pores tend to open up when exposed to the high temperatures that they encounter on the job. They become sponges for carcinogens.

Rates for multiple types of cancer are higher in firefighters across the country, experts say, including cancer of the blood, liver, lungs, stomach, colon and prostate as well as non-Hodgkin's lymphoma.

This really hit home for me. I spent 27 years as a firefighter, lost colleagues to cancer and even took out a cancer insurance policy of my own.

It was extremely difficult to watch some of my fire service friends contract cancer and die far too young. As a member of the House, it didn't me take long to agree to carry the legislation on flame retardants.

The original bill would have prohibited 10 flame-retardant chemicals but, through the process of passage, the list was reduced to four.

We focused on banning the chemicals deemed the most dangerous and/or still in use. Under the new law, a report on the other six chemicals is due to the Legislature this coming January. I will consider authoring another bill to expand the list of banned chemicals if further action is warranted.

We have taken a big step forward with this new law, and it could serve as a model for other states.

Along the way, we have helped increase nationwide awareness about children's health risks and the disproportionate cancer rates among firefighters. Studies, in fact, show that these rates for some cancers are more than twice as high compared to the general population.

Firefighting is dangerous work, and that will never change. We all understand the risks when we sign up to do the job. That said, it is important to learn from our actions and eliminate unnecessary threats to health.

The bill I authored to ban four flame-retardant chemicals is not the final answer, but it gets us pointed in the right direction. Eradicating these pervasive chemicals from homes is going to be a long process that will take a great deal of dialogue.

I am grateful to all the people who worked so hard to make this new law a reality, and I look forward to continuing this very important discussion. ★

Rep. Jeff Howe, a Republican from Rockville, was first elected to the Minnesota House of Representatives in 2012.

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