

# Building Insulation Code Change Fact Sheet

In January 2019, the California Building Standards Commission unanimously approved changes to the state building codes proposed by the California Office of the State Fire Marshal. The changes allow use of polystyrene insulation without flame retardants below a concrete slab-on-grade. These changes would maintain fire safety while improving human and environmental health.

A similar proposal for the 2021 International Residential Code (IRC) will be considered by the IRC Committee in Albuquerque, NM in May, 2019.



## Building codes drive the use of flame retardants in polystyrene insulation

In the US polystyrene building insulation contains flame retardants to meet building codes. However, flame retardants in insulation below a concrete slab do not increase fire safety, because in this situation there is no oxygen and no ignition source. In Sweden and Norway, updated building codes have allowed the use of flame retardant-free insulation for over 14 years.

## Flame retardants are linked to adverse health effects

Flame retardants previously used in polystyrene insulation have been banned because of their link to neurological impairment, hormone disruption, and aquatic toxicity. The replacement flame retardant PolyFR is a brominated chemical that has not been proven safe.

The manufacture, installation, demolition, landfilling, incineration and recycling of polystyrene insulation leads to environmental release of flame retardants and their toxic combustion by-products. Exposure can harm the health of construction workers and others exposed throughout the product life-cycle.

## Building codes can be safely updated to allow below-slab use of polystyrene insulation without flame retardants

An independent 2017 university study commissioned by the California State Fire Marshal evaluated polystyrene insulation manufactured with and without flame retardants in below-grade installations. **Key findings include:**

- When installed below a concrete slab, insulation without flame retardants presents no risk of fire spread to the building and will not endanger occupants or first responders.
- Adding flame retardants to polystyrene insulation does not significantly reduce its fire intensity.
- Polystyrene without flame retardants has comparable flammability to other combustible materials commonly found at construction sites.
- **Building codes can be safely updated to allow use of flame retardant-free below-slab polystyrene insulation.**

Read the report at <http://bit.ly/OSUReport>

Learn more at [GreenSciencePolicy.org/healthier-insulation](http://GreenSciencePolicy.org/healthier-insulation)

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