Fire Safe and Healthy Building Insulation

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Building Insulation Standards

- All insulation must pass ASTM E84: Steiner tunnel test
- Not appropriate for “materials that melt, drip, or delaminate”
  - like foamed plastic
- Foam plastics requires flame retardant chemicals to pass
Studies: Flame retardants do not provide a significant fire safety benefit behind a thermal barrier.
• FR-free EPS/XPS widely used in Europe

• Tons of FR-free foams for food service are produced, shipped, stored and used daily

• Flame retardants produce smokier, more toxic fires which may be harder to escape from
Flame Retardant Harm

• Insulation flame retardants cause:
  ▪ elevated cancer risk
  ▪ developmental/reproductive harm
  ▪ hormone disruption

• Others unstudied for health harm but related to harmful chemicals

• Organohalogen FR combustion by-products: halogenated dioxins and furans
  ▪ associated with types of cancer which disproportionately affect firefighters
State Fire Marshal Study

California State Fire Marshal study on FR-free polystyrene insulation beneath slab:

- No risk of fire spread to the building and or to occupants or first responders.
- FRs in insulation do not significantly reduce its fire intensity.
- Building codes can be safely updated to allow use of this insulation.

Phase II Working Group Report
August 17, 2017

Flammability Standards for Building Insulation Materials

Phase II Working Group Report:
Final Report
August 17, 2017

Prepared for
California Department of Forestry and Fire Protection (CAL FIRE)

By
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California Code Reform

California State Fire Marshal proposes building code reforms that allow choice of FR-free insulation beneath slab.

Jan 2019: CBSC unanimously adopts changes CRC and CBC to allow flame retardant-free insulation below a slab.
**RB131-19**

Allows the choice of flame retardant-free EPS and XPS insulation beneath a concrete slab on grade

- Aligns IRC and CRC

Committee disapproval: marking, potential misuse or inspection burden.

Public Comment RICH-2:

- Marking language simplified and aligned with industry standards
- Red stripes clearly designate material for inspection an proper use
RB131-19

• When there is no fire safety benefit, there is no rationale for requiring the use of flame retardants
• Voluntary change: allows builders the choice to use flame retardant-free EPS and XPS insulation
• Clear marking will facilitate inspection and proper use

Supporters:
For more information

- GreenSciencePolicy.org
- SixClasses.org