



**December 10, 2015, 10:00 AM**  
**Thermal Insulation**  
**Public Workshop**  
**Proposed Regulations**

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## History

- California Energy Commission (CEC) created in 1975 as result of energy crises.
- Standards for insulating material last revised 1981.
- Insulation program transferred to Bureau of Home Furnishings in 1985. Name changed to Bureau of Home Furnishings and Thermal Insulation in 1987.

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## History – Cont'd

- No changes except for editorial changes have been made to insulation standards since 1981.
- Home Furnishings and Thermal Insulation Act requires licensing by material type.
- Current standard lists 11 material types with specific forms. (i.e. board, spray applied, etc.)

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## History – Cont'd

- Many new insulating materials or combinations of materials and forms of material have been developed since 1981.
- Law provides for the Bureau to license any material if it reduces heat flow. Under current regulations the Bureau can only certify 11 materials and specific forms.
- Exemption in regulations allows any uncertified material to be sold if the manufacturer is licensed.

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## History – Cont'd

- Regulations proposed would regulate by form allowing multiple materials to be tested under same section.
- Tests would be specified for new materials, combination of materials or new forms.
- There would be no exemption from certification. All products would be certified.

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## Current Standards

Sec. 12-13-1551

(b) The provisions of this article shall apply only to the following types of insulating material:

1. Aluminum foil (reflective foil);
2. Cellular glass (board form);
3. Cellulose fiber (loose fill and spray applied);
4. Mineral aggregate (board form);
5. Mineral fiber (blankets, board form, loose fill);
6. Perlite (loose fill);
7. Polystyrene (board form, molded and extruded);
8. Polyurethane (board form and field applied);
9. Polyisocyanurate (board form and field applied);
10. Urea formaldehyde foam (field applied);
11. Vermiculite (loose fill).

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## Current Standards – Cont'd

- (d) Any type of insulating material not listed in subsection (b) may be sold within California notwithstanding any other provision of this article.

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## Proposal Summary :

- Deleted Section 12-13-1551 (b) as all materials are certified.
- New Section (c) below allows for alternative test methods as determined by CEC and the Bureau.
- ~~(cd) Any type of insulating material not listed in subsection (b) may be sold within California notwithstanding any other provision of this article.~~ Insulating material shall not be sold in California unless it is certified by the Bureau . For any insulating material not specifically identified in this article, where challenges of testing values have been submitted to the Bureau or are initiated by the Bureau, the Bureau, in consultation with the California Energy Commission, may certify the insulating material by applying testing and rating provisions similar to those defined in section 12-13-1553 as it deems most appropriate on a case by case basis.

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## Proposal Summary – Cont'd

- New Section (d) references other regulations controlling insulation material usage.
- (d) All insulating material subject to this article shall also meet California's Energy Efficiency Standards for Residential and Nonresidential Buildings, Title 24, Part 6, and Appliance Efficiency Regulations, Title 20, California Code of Regulations.

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## Proposal Summary – Cont'd

- Sec. 12-13-1552 – Added many definitions including for Blackbody, Thermal emittance, ISO, Radiant Barrier and Water Vapor Retarder.
- Removed definition of ANSI.
- Referenced definitions of Manufacturer and Quality Assurance program to the Home Furnishings and Thermal Insulation Act.
- Added a test standards section following the definitions.

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## Proposal Summary – Cont'd

- In section 12-13-1553 (a) 2. the following paragraph was added at the end of the section which allows for approval by the Bureau on a case by case basis:

The Bureau shall determine the adequacy of the test used to determine thermal performance and emittance. Where challenges of testing values have been submitted to the Bureau or are initiated by the Bureau, the Bureau, in consultation with the California Energy Commission, may certify the insulating material by applying testing and rating provisions similar to those defined in this section as it deems most appropriate on a case by case basis.

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## Proposal Summary – Cont'd

- Sec. 12-13-1553(a) – Updated all tests to the current version.
- Added thermal emittance, LTTR and U-factor as a thermal performance properties.
- Added section on tests used for thermal resistance of insulation.
- Added another category for reflective insulations and designated thermal emittance tests.

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## Proposal Summary – Cont'd

- Removed option to list an additional R-value for an air space for constructions other than reflective insulation tested to ASTM 1363-05.
- Removed reference to “Test Descriptions for Insulating Material” document.
- Added option to claim Tier 1 or Tier 2 VOC
- Added Vapor retarder classes.

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## Proposal Summary – Cont'd

- Sec. 12-13-1553
  - b) BLANKET OR BATT
  - c) BLOCK OR BOARD
  - d) DUCTING
  - e) INSULATION SYSTEMS
  - f) LOOSE FILL
  - g) RADIANT BARRIER OR REFLECTIVE INSULATIONS
  - h) SPRAY APPLIED FIBROUS INSULATION
  - i) SPRAY OR FIELD APPLIED FOAM
  - j) STRUCTURAL PANELS AND SHEATHING
  - k) TUBULAR INSULATION
  - l) VACUUM PANELS AND GAS-FILLED PANELS

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## Proposal Summary – Cont'd

- **Combustion resistance for insulation except foam insulation:** The material shall be tested to meet the requirements CBC of Section 720 .
- **Combustion resistance for foam insulation:** The material shall be tested and meet the criteria of Sections 2603.1-2603.9 of the CBC.
- Specification for Urea Formaldehyde foam was referred to Title 20.

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## Proposal Summary – Cont'd

- Sec. 12-13-1554
- Added Mutual recognition arrangement (MRA) signatories in addition to the National Voluntary Laboratory Accreditation Program (NVLAP) as accrediting agencies for the third party testing laboratories.

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## Proposal Summary – Cont'd

- Sec. 12-13-1557- updated test and building code references.
- Added requirement that the license number be on the label.
- Note: Registry number policy change, effective January 1, 2016.
- Added labeling requirements to be consistent with 16 CFR 460.12.

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## Proposed Changes to Identification and Labeling

- a) Except as specified in subsection (b), Item ~~23~~, of this section, no insulation shall be sold or installed in California ~~on or after September 22, 1981,~~ unless the insulating material, container, bundle or similar packaging material, bears a visible ~~Commission~~ Bureau approved statement certifying that a representative sample of the insulation material has been tested and approved by an approved laboratory and complies with the requirements of this article.

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## Proposed Changes to Identification and Labeling – Cont'd

- (b) The ~~Commission~~-Bureau approved statement shall consist of either:
  1. A design or statement approved by the ~~Executive Director~~-Bureau,
  - or
  2. An identification of the manufacturer and ~~any a~~ statement that the material meets the quality standards of the State of California. A statement that the material meets the quality standards of the State of California included in a bill of lading shall fulfill the requirements of this section only if either the product is being shipped in bulk, or the container or product is not otherwise labeled by the manufacturer and the product is being sold to its ultimate user.

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## Proposed Changes to Identification and Labeling – Cont'd

- The label for all insulation and radiant barrier packages of insulation must contain, at a minimum, the following:
  - (1) The type of insulation.
  - (2) The license number assigned by the Bureau.
  - (3) The product identification code as given to the Bureau for use in the Directory of Certified Insulation Materials.
  - (4) All of the disclosures required by Section 460.12 of Title 16 of the Code of Federal Regulations.
  - (5) Any information required by the CBC and CMC for a particular product.
  - (6) The tested thermal performance or thermal emittance, as appropriate.

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## Enforcement

- Sections 12-13-1558 thru 12-13-1561.40 describe the Bureau's ability to:
  1. Inspect Facilities
  2. Test Insulation Sample Performance
  3. Cost Recovery for Noncompliant Samples
  4. Describes the Citation and Appeal Process
- Mirror Provisions in Home Furnishings Regulations

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