

## DEPARTMENT OF CONSUMER AFFAIRS

### BUREAU OF ELECTRONIC AND APPLIANCE REPAIR, HOME FURNISHINGS AND THERMAL INSULATION

#### **Summary of Proposed Changes to the Standards for Insulating Materials, Title 24, Part 12, Chapter 12-13**

**Background:** The Standards for Insulating Material were first developed by the California Energy Commission (CEC) as part of the implementation of the Warren-Alquist Act (1974). The responsibility for the Standards was transferred to the Bureau of Home Furnishings in 1985, now named the Bureau of Electronic and Appliance Repair, Home Furnishings and Thermal Insulation (Bureau).

The CEC requires that all insulation materials used to meet the Building Energy Efficiency Standards be certified by the Bureau. Over the years, the CEC has periodically updated the Building Energy Efficiency Standards in response to legislation, updated technology, and new insulation materials on the market. The Home Furnishings and Thermal Insulation Act requires that any material acting as an insulation material to satisfy the Building Energy Efficiency Standards be licensed with the Bureau.

Due to the limited material types and insulation forms listed in the current Standards, the number and variety of insulation materials the Bureau is able to certify has not kept up with changes in the insulation market and the requirements of the Building Energy Efficiency Standards. Today only 52 percent of the Thermal Insulation licensees are able to list their products in the Bureau's certified directory. The current Standards allow the insulation manufacturer of the uncertified insulation to sell the product and let the local building code officials determine whether the product satisfies the Building Energy Efficiency Standards.

**Summary of Proposed Changes:** These proposed standards change the way insulation materials are categorized to include new insulating materials and forms of insulation on the market today. These standards would also allow the Bureau to add and certify new insulating materials and forms of insulation as needed.

These standards update the authority cited and reference codes cited to the appropriate codes for the Bureau. The enforcement and inspection sections are also synchronized with the Bureau's Home Furnishing regulations. Sections containing obsolete information were deleted. The revision will ensure that all insulation materials are certified as required by the Building Energy Efficiency Standards.

#### **Summary of Proposed Changes to Application and Scope, Sec. 12-13-1551.**

Subdivision (a) was updated to include insulation systems and low emitting materials. Clarification was made that the standards govern insulation sold in California and the implementation date was removed since it is obsolete. The specific purpose and rationale for this change is to update the scope to include changes of insulation

materials allowed to meet requirements of the Building Energy Efficiency Standards and it is necessary to update the regulations to current technology and practice.

Most of subdivision (b) was deleted. The specific purpose and rationale for this change is that grouping products by form allows new insulation materials to be certified in the Directory of Certified Insulation Materials based on an existing form of insulation instead of by material type and it is necessary to update the regulations to current technology and practice.

Subdivision (c) was joined with the remaining provisions of subdivision (b) and clarification was made that provisions of this article applies to insulation sold or installed in California. The specific purpose and rationale for this change is it clarifies which insulating materials are covered by this article and it is necessary to update the regulations to current technology and practice.

Subdivision (d) provisions were placed into a new subdivision (c) and the exemption for materials not listed in section (b) was eliminated. All insulation materials must be certified to be sold or installed in California. For insulating materials not currently listed in these standards, the Bureau will determine the appropriate testing for certification in the Directory of Certified Insulation Materials. The specific purpose and rationale for this change is to eliminate the exemption from certification for insulating materials not specifically identified in the section and it is necessary update the regulations.

A new subdivision (d) is added. This statement clarifies that in addition to meeting to meeting the requirements of this article; the insulation material must also meet the requirements of California's Building Energy Efficiency Standards for Residential and Nonresidential Buildings as well as Appliance Efficiency Regulations. The specific purpose and rationale for this addition is it clarifies that any insulating materials covered by this article must also meet the Building Energy Efficiency Standards or Appliance Efficiency Requirements and it is necessary to update the regulations.

#### **Summary of Proposed Changes to Definitions, Sec. 12-13-1552.**

A paragraph was added referencing where to find definitions not listed in this section. All definitions previously found in other sections of this article were consolidated in this section. In addition, new definitions were added, old definitions were deleted and existing definitions were modified to meet the needs of these standards. All bullets were removed from existing definitions and subdivisions were deleted from this section to conform to most definition sections found within the Building Standards Code.

The specific purpose and rationale for this change is that it updates the definition of terms in the Standards and it is necessary to promulgate effective regulations.

## **Summary of Addition of Referenced Tests and Material Standards, Sec. 12-13-1552.10.**

The new section contains a list of all the tests referenced in this article.

The specific purpose and rationale for this change is it to provide easy access to the full information for tests specified for insulating materials covered by this article and it is necessary to improve compliance with the regulations.

## **Summary of Proposed Changes to Quality Standards, Sec. 12-13-1553.**

Throughout this section, the ANSI of the ANSI/ASTM reference is dropped for all specified tests since the tests are now referred to as ASTM tests only. Also the most recent version of a test is referenced.

In subdivision (a), subsection (1), a statement is added for ASTM E-84 testing of insulating materials at representative thickness of the insulation. In subsection 2, The “Executive Director” is replaced by “Bureau” as the decision-making authority and the criteria for grouping products for testing are clarified and the procedure for certifying insulating materials on a case by case basis was added. In subsection 3, References to low emitting materials, U-factor and thermal emittance is added. In subsection 4, deleted average testing temperature requirements. A new subsection 5 is added describing general thermal resistance testing requirements for all insulation and insulation systems, except reflective insulation. In the new subsection 6, changed subsection heading from 5 to 6 and added other reflective insulations, framing percentage and two tests for thermal emittance are added. In new subsection 7, changed subsection heading from 6 to 7, updated to reference reflective insulation material and eliminated the option to claim R-value for air space for products other than reflective insulation. In new subsection 8, changed subsection heading from 7 to 8 and updated referenced subsection numbers. In new subsection 9, changed subsection heading from 8 to 9 and updated referenced subsection numbers Deleted original subsection 9 referring to the tests listed in “Test Descriptions for Insulating Materials”. In subsection 10, updated referenced test years. In subsection 11, the “United States National Bureau of Standards” is replaced by its new name “United States National Institute of Standards and Technology,” a reference sample statement was also added for clarification . In subsection 12, editorial changes explain how the “Bureau” takes responsibility from the “Executive Director” and the “full Commission” for design density claims. In subsection 13, editorial changes explain how the “Bureau” takes responsibility from the “Executive Director” and the “full Commission” for certifying tests performed at representative thicknesses greater than 1 inch for insulation materials and the “United States National Bureau of Standards” is replaced by its new name “United States National Institute of Standards and Technology”. In subsection 15, editorial changes were made in a formula and reference to Test 6 was deleted. Subsection 16 was added to address CalGreen Codes for insulation claiming to meet pollutant controls. Subsection 17 was added to reference CEC standards specified in Title 20.

The specific purpose and rationale for this addition is to clarify general testing standards of insulating materials covered by this article and it is necessary to reflect the transfer of authority from the California Energy Commission to the Bureau.

In subdivision (b), Aluminum foil is moved to “Radiant Barrier of Reflective Insulation.” The material description, standard and test methods related to Aluminum foil are deleted from this subdivision and moved to subdivision (g). The subdivision is named “Blanket or Batt” for the “Blanket or Batt” form of insulating material. The appropriate material descriptions and tests are moved from other subdivision in the original standards if possible. New descriptions, standards and test methods are added as needed. Tests are third party certified tests by ASTM and ISO.

The specific purpose and rationale for this change is it clarifies the testing requirements for “Blanket or Batt” form insulating materials and it is necessary to update the regulations to current technology and practice.

In subdivision (c), Cellular Glass in Board Form is replaced by the more generic form “Block or Board”. The material description and standards related to Cellular Glass in Board Form are retained in this subdivision. The appropriate material descriptions and tests are moved from other subdivision in the original standards if possible. New descriptions, standards and test methods are added as needed. Tests are third party certified tests by ASTM.

The specific purpose and rationale for this change is it clarifies the testing requirements for “Block or Board” form insulating materials and it is necessary to update the regulations to current technology and practice.

In subdivision (d), Cellulose Fiber in Loose Fill Form is moved to “Loose Fill.” The material description, standard and test methods related to Cellulose Fiber in loose Fill Form are deleted from this subdivision and moved to subdivision (f). The subdivision is named “Ducting” for the “Ducting” form of insulating material. New descriptions, standards and test methods are added as needed. Tests are third party certified tests by ASTM.

The specific purpose and rationale for this change is it clarifies the testing requirements for “Ducting” form insulating materials and it is necessary to update the regulations to current technology and practice.

In subdivision (e), Cellulose Fiber Spray Applied is moved to “Spray or Field Applied.” The material description, standard and test methods related to Cellulose Fiber Spray Applied are deleted from this subdivision and moved to subdivision (h). The subdivision is named “Insulation systems” for the insulation systems form of insulating material. New descriptions, standards and test methods are added as needed. Tests are third party certified tests by ASTM.

The specific purpose and rationale for this change is it clarifies the testing requirements for “Insulation systems” form insulating materials and it is necessary to update the regulations to current technology and practice.

In subdivision (f), Mineral Aggregate in Board Form is moved to “Block or Board.” The material description, standard and test methods related to Mineral Aggregate in Board Form are deleted from this subdivision and moved to subdivision (c). The subdivision is named “Loose Fill” for the “Loose Fill” form of insulating material. The appropriate material descriptions, standards, and test methods are moved from other sections in the original standards if possible. New descriptions, standards and test methods are added as needed. Tests are third party certified tests by ASTM.

The specific purpose and rationale for this change is it clarifies the testing requirements for “Loose Fill” form insulating materials and it is necessary to update the regulations to current technology and practice.

In subdivision (g), Mineral Fiber in Blanket Form is moved to “Blanket or Batt.” The material descriptions, standards, and test methods related to Mineral Fiber in Blanket Form are deleted from this subdivision and moved to subdivision (b). The subdivision is named “Radiant barrier or Reflective Insulation” for the “Radiant barrier or Reflective Insulation form of insulating material. The appropriate material descriptions, standards, and tests are moved from other sections in the original standards if possible. New descriptions, standards, and test methods are added as needed. Tests are third party certified tests by ASTM.

The specific purpose and rationale for this change is it clarifies the testing requirements for “Radiant barrier or Reflective Insulation” form insulating materials and it is necessary to update the regulations to current technology and practice.

In subdivision (h), Mineral Fiber in Board Form is moved to “Block or Board.” The material descriptions, standards, and test methods to Mineral Fiber in Board Form are deleted from this subdivision and moved to subdivision (c). The subdivision is named “Spray Applied Fibrous Insulation” for the spray applied fibrous insulation form of insulating material. The appropriate material descriptions and tests are moved from other sections in the original standards if possible. New descriptions and test methods are added as needed. Tests are third party certified tests by ASTM.

The specific purpose and rationale for this change is it clarifies the testing requirements for Spray Applied Fibrous Insulation form insulating materials and it is necessary to update the regulations to current technology and practice.

In subdivision (i), the subdivision is named “Spray or Field Applied Foam” for the spray or field applied insulation form of insulating material. The appropriate material descriptions and tests are moved from other subdivisions in the original standards if possible. New descriptions and test methods are added as needed. Tests are third party certified tests by ASTM.

The specific purpose and rationale for this change is it clarifies the testing requirements for Spray Applied Fibrous Insulation form insulating materials and it is necessary to update the regulations to current technology and practice.

The provisions also specify that the use and specifications for urea formaldehyde foam is established by CEC, and a cross reference was added that specifies use and specification requirements.

In subdivision (j), Mineral Fiber in Loose fill Form is moved to “Loose Fill.” The material descriptions, standards and test methods related to Mineral Fiber in Loose Fill Form are deleted from this subdivision and moved to subdivision (f). The subdivision is named “Structural Panels and Sheathing” for the Structural Panels and Sheathing form of insulating material. New descriptions, standards and test methods are added as needed. Tests are third party certified tests by ASTM.

The specific purpose and rationale for this change is it clarifies the testing requirements for “Structural Panels and Sheathing” form insulating materials and it is necessary to update the regulations to current technology and practice.

In subdivision (k), Perlite in Loose Fill Form is moved to “Loose Fill”. The material description, standard and test methods related to Perlite in Loose Fill Form are deleted from this subdivision and moved to subdivision (f). The subdivision is named “Tubular Insulation” for the “Tubular Insulation” form of insulating material. New descriptions, standards and test methods are added as needed. Tests are third party certified tests by ASTM.

The specific purpose and rationale for this change is it clarifies the testing requirements for “Tubular Insulation” form insulating materials and it is necessary to update the regulations to current technology and practice.

In subdivision (l), Polystyrene Board Form is moved to “Block or Board.” The form “Vacuum Panel” to match the list in Sec. 12-13-1551 (b). The material description, standard and test methods related to Polystyrene Board Form are deleted from this subdivision and moved to subdivision (c). The subdivision is named “Vacuum Panels and Gas-Filled Panels” for the Vacuum Panels and gas filled panels forms of insulating material. New descriptions, standards and test methods are added as needed. Tests are third party certified tests by ASTM.

The specific purpose and rationale for this change is it clarifies the testing requirements for “Vacuum Pane and Gas Filled Panel” form insulating materials and it is necessary to update the regulations to current technology and practice.

Polyurethane and Polyisocyanurate in Board Form and Field Applied. This subdivision has been deleted. Polyurethane and Polyisocyanurate in Board Form are deleted from this subdivision and moved to subdivision (c). The material description, standard and

test methods related to Polyurethane and Polyisocyanurate Field Applied are deleted from this subdivision and moved to subdivision (h).

The specific purpose and rationale for this deletion is it clarifies the testing requirements for “Polyurethane and Polyisocyanurate in Board” form and “Polyurethane and Polyisocyanurate Field Applied” form insulating materials and it is necessary to update the regulations to current technology and practice.

In subdivision (m), Urea Formaldehyde Foam Field Applied. This subdivision has been deleted. The material description, standard and test methods related to Urea Formaldehyde Foam Field Applied is deleted from this subdivision and moved to subdivision (h).

The specific purpose and rationale for this deletion is it clarifies the testing requirements for “Urea Formaldehyde Foam Field applied” form insulating material and it is necessary to update the regulations to current technology and practice.

Vermiculite in Loose Fill Form. This subdivision has been deleted. The material description, standard and test methods related to Vermiculite in Loose Fill Form is deleted from this subdivision and moved to subdivision (f).

The specific purpose and rationale for this deletion is it clarifies the testing requirements for “Vermiculite in Loose Fill Form” form insulating material and it is necessary to update the regulations to current technology and practice.

#### **Summary of Proposed Changes to Approval of Testing Laboratories, Sec. 12-13-1554.**

Subdivision (a) and most of subdivision (b) were deleted because of obsolete dates. Also in subsection (b), NVLAP currently as Mutual Recognition Arrangements (MRA) with ILAC - International Laboratory Accreditation Cooperation and APLAC - Asia Pacific Laboratory Accreditation Cooperation. This means the organizations accept laboratories accredited by one group as being accredited by the other members of the MRA. The statement “and its MRA signatories” was added to allow a greater availability of certified testing laboratories.

The specific purpose and rationale for this change is it clarifies which third party testing laboratories are approved to test insulating materials covered by this article and it is necessary to improve compliance with the regulations.

#### **Summary of Proposed Changes to Certification, Sec. 12-13-1555.**

An obsolete date was removed from subdivision (a). The “Bureau” was substituted for “Executive Director” as the decision-making authority in subdivision (b). Subdivision (d), (e) and (f) were removed because the Bureau has never followed them.

The specific purpose and rationale for this change is it clarifies certification of insulating materials covered by this article and it is necessary to improve compliance with the regulations.

**Summary of Proposed Changes to Identification, Sec. 12-13-1557.**

The obsolete implementation date was removed. The “Bureau” was substituted for “Commission” as the certifying authority and the “Bureau” was substituted for “Commission” as the approving authority. Subdivision (b) 3 was merged into Subdivision (b) 2. The ANSI of the ANSI/ASTM reference is dropped for the specified test since the test is now referred to as an ASTM test only. Updated building code and test references were updated to most recent versions.

The specific purpose and rationale for this change is it clarifies identification of insulating materials covered by this article and it is necessary to improve compliance with the regulations.

**Summary of Proposed Changes to General Labeling Requirements, Sec. 12-13-1557.10.**

This section was added to clarify the labeling information needed on a product so the Bureau can identify the product in the Directory of Certified Insulation Materials. These are based on the Federal Trade Commission (FTC) R-value rule requirements. The license number was added to enable easier tracking of certified material.

The specific purpose and rationale for this change is it clarifies labeling requirements for insulating materials covered by this article and it is necessary to improve compliance with the regulations.

**Summary of Proposed Changes to Inspections, Sec. 12-13-1558.**

The “Bureau” was substituted for “Commission” as the inspecting authority. The referenced article was changed to “with the Home Furnishings and Thermal Insulation Act and any regulations adopted by it” from “with the standards promulgated pursuant to Chapter 10.5 of the California Public Resources Code”.

The specific purpose and rationale for this change is it clarifies inspection of insulating materials manufacturers covered by this article and it is necessary to improve compliance with the regulations.

**Summary of Proposed Changes to Performance Tests, Sec. 12-13-1559.**

The “Bureau” was substituted for “Commission” as the testing authority. The referenced article was changed to “with the Home Furnishings and Thermal Insulation Act and any regulations adopted by it” from “standards adopted pursuant to Chapter 10.5 of the California Public Resources Code”.

The specific purpose and rationale for this change is it clarifies the performance testing of insulating materials covered by this article and it is necessary to improve compliance with the regulations.



**Summary of Proposed Changes to Costs of Inspection and Testing, Sec. 12-13-1560.**

A cost recovery statement regarding recovery of costs for failed performance testing was added to reflect the Bureau's statutory authority.

The specific purpose and rationale for this change is it clarifies the cost recovery for failed performance tests of insulating materials covered by this article and it is necessary to improve compliance with the regulations.

**Summary of Proposed Changes to Enforcement, Sec. 12-13-1561.**

A general enforcement statement was added to explain the consequences of failure to comply with this article pursuant to Section 19210 of the Business and Professions Code.

The specific purpose and rationale for this change is it clarifies the general enforcement process for manufacturers of insulating materials covered by this article and it is necessary to improve compliance with the regulations.

**Summary of Proposed Changes to Citations, Sec. 12-13-1561.10.**

Specific authority to issue citations for violations of law or regulations was added.

The specific purpose and rationale for this change is it clarifies the citation authority for failed performance of insulating materials covered by this article and it is necessary to improve compliance with the regulations.

**Summary of Proposed Changes to Citation Factors, Sec. 12-13-1561.20.**

A description of the factors considered by the Chief in determining administrative fines or issuing an order of abatement was added.

The specific purpose and rationale for this change is it clarifies the citation factors for failed performance of insulating materials covered by this article and it is necessary to improve compliance with the regulations.

**Summary of Proposed Changes to Compliance with Citation/Order of Abatement, Sec. 12-13-1561.30.**

A section describing how to ask for an extension of time for and the consequences of failure to comply with a citation fine or an Order of Abatement was added.

The specific purpose and rationale for this change is it clarifies the citation compliance process for failed performance of insulating materials covered by this article and it is necessary to improve compliance with the regulations.

**Summary of Proposed Changes to Contested Citations and Request for a Hearing or Informal Citation Conference, Sec. 12-13-1561.40.**

A section describing the process of contesting citations or requesting an administrative hearing or informal citation conference was added.

The specific purpose and rationale for this change is it clarifies the process for contesting citations for failed performance of insulating materials covered by this article and it is necessary to improve compliance with the regulations.

**Summary of Proposed Changes to Release of Information, Secs. 12-13-1562-1565.**

These sections were deleted.

The specific purpose and rationale for this change is it removes restrictions on various provisions that the Bureau does not have the authority to grant from this article and it is necessary to update the regulations.

DRAFT