



Designation: C1321 – 14

# Standard Practice for Installation and Use of Interior Radiation Control Coating Systems (IRCCS) in Building Construction<sup>1</sup>

This standard is issued under the fixed designation C1321; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reappraisal. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reappraisal.

## 1. Scope

1.1 This practice has been prepared for use by the designer, specifier, and applicator of IRCCS (Interior Radiation Control Coating Systems) for use in building construction. The scope contains instructions related to the use and installation of IRCCS, including a surface(s) having a far-infrared emittance of 0.25 or less that is sprayed or painted.<sup>2</sup> Some examples that this practice is intended to address include: (1) low emittance surfaces in vented building envelope cavities intended to retard radiant transfer across the vented airspace; (2) low emittance surfaces at interior building surfaces intended to retard radiant transfer to or from building inhabitants; and (3) low emittance surfaces at interior building surfaces intended to reduce radiant transfer to or from heating or cooling systems. See Fig. 1 and Fig. 2 for typical applications.

1.2 This practice covers the installation process from pre-installation inspection through post-installation. It does not cover the production of the Interior Radiation Control Coating Materials.

1.3 This practice is not intended to replace the manufacturer's installation instructions, but it shall be used in conjunction with such instructions. This practice is not intended to supersede local, state, or federal codes.

1.4 This practice assumes that the installer possesses a good working knowledge of the application codes and regulations, safety practices, tools, equipment, and methods necessary for the installation of Interior Coating Materials. It also assumes that the installer understands the fundamentals of building construction that affect the installation of an IRCCS.

1.5 When the installation or use of Interior Radiation Control Coating Materials, accessories, and systems pose safety or health problems, the manufacturer shall provide the user appropriate current information regarding any known

problems associated with the intended use of the products and shall also provide direction on protective measures to be employed for safe utilization. The user shall establish appropriate safety and health practices and determine the applicability of regulatory requirements prior to use.

1.6 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.* Specific precautionary statements are contained in Sections 5 and 7.

## 2. Referenced Documents

### 2.1 ASTM Standards:<sup>3</sup>

C168 Terminology Relating to Thermal Insulation

C1371 Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emis-someters

E84 Test Method for Surface Burning Characteristics of Building Materials

E96/E96M Test Methods for Water Vapor Transmission of Materials

### 2.2 NFPA Standards:<sup>4</sup>

NFPA 54 National Fuel Gas Code

NFPA 211 Standard for Chimneys, Fireplaces and Vents

### 2.3 Other Documents:

CPSC Product Safety Fact Sheet No. 18 "The Home Electrical System"<sup>5</sup>

## 3. Terminology

3.1 *Definitions*—For definitions of terms used in this practice, refer to Terminology C168.

3.2 *Definitions of Terms Specific to This Standard:*

<sup>1</sup> This practice is under the jurisdiction of ASTM Committee C16 on Thermal Insulation and is the direct responsibility of Subcommittee C16.21 on Reflective Insulation.

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<sup>2</sup> The as-manufactured emittance of Interior Radiation Control Coating product, as determined on a typical substrate, should be stated on the label (see 7.2.1).

<sup>3</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

<sup>4</sup> Available from National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, MA 02169-7471, <http://www.nfpa.org>.

<sup>5</sup> Available from Consumer Specialty Products Association (CSPA), 900 17th St., NW, Suite 300, Washington, DC 20006, <http://www.cspa.org>.