



Designation: C1313 – 05

# Standard Specification for Sheet Radiant Barriers for Building Construction Applications<sup>1</sup>

This standard is issued under the fixed designation C1313; 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 reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

## 1. Scope

1.1 This specification covers the general physical property requirements of radiant barrier materials for use in building construction. The scope is specifically limited to requirements for radiant barrier sheet materials that consist of at least one surface having a far-infrared emittance of 0.1 or less, such as metallic foils or metallic deposits mounted or unmounted on substrates.

1.2 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

1.3 The following safety hazards caveat pertains only to the test methods (Section 10) described in this specification. *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.*

## 2. Referenced Documents

2.1 *ASTM Standards*:<sup>2</sup>

C168 Terminology Relating to Thermal Insulation

C390 Practice for Sampling and Acceptance of Thermal Insulation Lots

C1158 Practice for Installation and Use of Radiant Barrier Systems (RBS) in Building Construction

C1338 Test Method for Determining Fungi Resistance of Insulation Materials and Facings

C1371 Test Method for Determination of Emittance of

Materials Near Room Temperature Using Portable Emis-  
someters

D2261 Test Method for Tearing Strength of Fabrics by the  
Tongue (Single Rip) Procedure (Constant-Rate-of-  
Extension Tensile Testing Machine)

D3310 Test Method for Determining Corrosivity of Adhe-  
sive Materials

E84 Test Method for Surface Burning Characteristics of  
Building Materials

E96/E96M Test Methods for Water Vapor Transmission of  
Materials

2.2 *Other Standards*:

TAPPI Test Method T 512 sp-02: Creasing of Flexible  
Packaging Material Paper Specimens for Testing<sup>3</sup>

## 3. Terminology

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

3.2 *Definitions of Terms Specific to This Standard*:

3.2.1 *radiant barrier*—a low emittance (0.1 or less) surface  
used in the construction of a radiant barrier system.

3.2.2 *radiant barrier system (RBS)*—a building construction  
consisting of a radiant barrier bounded by an open air space.

## 4. Ordering Information

4.1 Prior to purchase, for sampling and acceptance proce-  
dures, Practice C390 may be agreed to by purchaser and  
manufacturer.

4.2 Specify the width and total area to be installed.

4.3 Specify any special markings.

## 5. Materials and Manufacture

5.1 Sheet radiant barrier materials shall consist of low  
emittance surface(s) that may be in combination with any  
substrates and adhesives required to meet the specified physical  
material properties.

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

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

<sup>3</sup> Available from Technical Association of the Pulp and Paper Industry (TAPPI), P.O. Box 105113, Atlanta, GA 30348; 15 Technology Parkway South, Norcross, GA 30092.