



Standard Guide for Selecting Jacketing Materials for Thermal Insulation¹

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1. Scope

1.1 This guide covers criteria for selecting thermal insulation jacketing materials and is not intended for use as a performance or product specification.

1.2 This guide applies to jacketing materials applied over thermal insulation for piping, ducts, and equipment.

1.3 This guide includes jacketing materials used over thermal insulation whether the insulation is in the form of pipe, board, or blanket, or field applied materials that are self-supporting, including insulating cements.

1.4 This guide does not include covers or other retaining walls that contain loose fill, other nonsupporting insulation materials, or conduits or containers for buried insulation systems.

1.5 This guide does not include mastics and coatings and their reinforcements.

1.6 The values stated in inch-pound units are to be regarded as the standard. The SI values given in parentheses are provided for information only.

1.7 *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:

A 240/A 240M Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications²

A 366/A 366M Specification for Steel, Sheet, Carbon, Cold-Rolled, Commercial Quality³

B 209 Specification for Aluminum and Aluminum-Alloy Sheet and Plate⁴

C 168 Terminology Relating to Thermal Insulation⁵

C 488 Test Method for Conducting Exterior Exposure Tests of Finishes for Thermal Insulation⁵

C 835 Test Method for Total Hemispherical Emittance of Surfaces up to 1400°C⁵

C 921 Specification for Jackets for Thermal Insulation⁵

C 1057 Practice for Determination of Skin Contact Temperature from Heated Surfaces Using a Mathematical Model and Thermesthesiometer⁵

C 1136 Specification for Flexible, Low Permeance Vapor Retarders for Thermal Insulation⁵

C 1258 Test Method for Elevated Temperature and Humidity Resistance of Vapor Retarders for Insulation⁵

C 1263 Test Method for Thermal Integrity of Flexible Water Vapor Retarders⁵

C 1338 Test Method for Determining Fungi Resistance of Insulation Materials and Facings⁵

D 828 Test Methods for Tensile Properties of Paper and Paperboard Using Constant-Rate-of-Elongation Apparatus⁶

D 882 Test Method for Tensile Properties of Thin Plastic Sheeting⁷

D 1204 Test Method for Linear Dimensional Changes of Nonrigid Thermoplastic Sheeting or Film at Elevated Temperature⁷

E 84 Test Method for Surface Burning Characteristics of Building Materials⁸

E 96 Test Methods for Water Vapor Transmission of Materials⁵

E 119 Method for Fire Tests of Building Construction and Materials⁸

E 596 Method for Laboratory Measurement of Noise Reduction of Sound-Isolating Enclosures⁵

F 1249 Test Method for Water Vapor Transmission Rate through Plastic Film and Sheeting Using a Modulated Infrared Sensor⁶

2.2 TAPPI Standards:⁹

T461 Flame Resistance of Treated Paper and Paperboard

T803 Puncture Test of Containerboard

¹ This guide is under the jurisdiction of ASTM Committee C16 on Thermal Insulation and is direct responsibility of Subcommittee C16.40 on Insulation Systems.

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² *Annual Book of ASTM Standards*, Vol 01.03.

³ Discontinued. Replaced by A 1008/A 1008M. See 1999 *Annual Book of ASTM Standards*, Vol 01.03.

⁴ *Annual Book of ASTM Standards*, Vol 02.02.

⁵ *Annual Book of ASTM Standards*, Vol 04.06.

⁶ *Annual Book of ASTM Standards*, Vol 15.09.

⁷ *Annual Book of ASTM Standards*, Vol 08.01.

⁸ *Annual Book of ASTM Standards*, Vol 04.07.

⁹ TAPPI, 15 Technology Parkway South, Norcross, GA 30092.