



Standard Specification for Mineral Fiber Pipe Insulation¹

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This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This specification covers mineral fiber insulation produced to form hollow cylinders for standard pipe and tubing sizes. The mineral fiber pipe insulation may be molded or precision v-grooved, with one or more walls split longitudinally for use on pipe temperatures up to 1200°F (650°C).

1.2 For satisfactory performance, properly installed protective vapor retarders or barriers should be used on sub-ambient temperature applications to reduce movement of moisture through or around the insulation to the colder surface. Failure to use a vapor barrier can lead to insulation and system damage. Refer to Practice C 921 to aid material selection.

1.3 Flexible mineral fiber wrap products such as perpendicular-oriented fiber insulation rolls, non-precision or manually scored block or board, or flexible boards or blankets used as pipe insulation, are not covered by this specification.

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

1.5 The following safety hazards caveat applies to the test methods portion, Section 11, only: *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:

- C 167 Test Methods for Thickness and Density of Blanket or Batt Thermal Insulations²
- C 168 Terminology Relating to Thermal Insulating Materials²
- C 177 Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus²

C 302 Test Method for Density of Preformed Pipe-Covering-Type Thermal Insulation²

C 335 Test Method for Steady-State Heat Transfer Properties of Horizontal Pipe Insulation²

C 356 Test Method for Linear Shrinkage of Preformed High-Temperature Thermal Insulation Subjected to Soaking Heat²

C 390 Criteria for Sampling and Acceptance of Preformed Thermal Insulation Lots²

C 411 Test Method for Hot-Surface Performance of High-Temperature Thermal Insulation²

C 447 Practice for Estimating the Maximum Use Temperature of Insulations²

C 585 Practice for Inner and Outer Diameters of Rigid Thermal Insulation for Nominal Sizes of Pipe and Tubing (NPS System)²

C 612 Specification for Mineral Fiber Block and Board Thermal Insulation²

C 795 Specification for Thermal Insulation for Use in Contact with Austenitic Stainless Steel²

C 921 Practice for Determining the Properties of Jacketing Materials for Thermal Insulation²

C 1045 Practice for Calculating Thermal Transmission Properties from Steady-State Heat Flux Measurements²

C 1058 Practice for Selecting Temperatures for Evaluating and Reporting Thermal Properties of Thermal Insulation²

C 1104/C1104M Test Method for Determining the Water Vapor Sorption of Unfaced Mineral Fiber Insulation²

E 84 Test Method for Surface Burning Characteristics of Building Materials³

2.2 Other Standards:

UL 723 Tests for Surface Burning of Building Materials, available from Underwriters Laboratories, 333 Pfingsten Road, Northbrook, IL 60062-2026

NFPA 255 Method of Tests of Surface Burning Characteristics of Building Materials, available from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269

CAN/ULC-S102-M88 Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies, available from Underwriters Laboratories of

¹ This specification is under the jurisdiction of ASTM Committee C16 on Thermal Insulation and is the direct responsibility of Subcommittee C16.20 on Homogeneous Inorganic Thermal Insulations.

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² Annual Book of ASTM Standards, Vol 04.06.

³ Annual Book of ASTM Standards, Vol 04.07.