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Standard Specification for Flexible Fibrous Glass Blanket Insulation Used to Externally Insulate HVAC Ducts¹

This standard is issued under the fixed designation C 1290; 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 (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers the composition, size, dimensions, and physical properties of flexible fiber glass blanket, ductwrap, used to externally insulate HVAC ducts used for the distribution of condition air with a temperature up to 250°F (121°C).

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

1.3 When the installation and use of thermal insulation materials, accessories, and systems may pose safety and health problems, the manufacturer shall provide the user appropriate current information regarding any known problems associated with the recommended use of the company's products, and shall also recommend protective measures to be employed in their safe utilization. The user shall establish appropriate safety and health practices and determine the applicability of regulatory requirements prior to use.

1.4 The following safety hazards caveat pertains only to the test methods, Section 13, 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:

- 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 390 Criteria for Sampling and Acceptance of Preformed Thermal Insulation Lots²
- C 411 Test Method for Hot-Surface Performance of High-Temperature Thermal Insulation²

¹ This specification is under the jurisdiction of ASTM Committee C-16 on Thermal Insulation and is under the direct responsibility of Subcommittee C16.23 on Blanket and Loose Fill Insulation.

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² Annual Book of ASTM Standards, Vol 04.06.

C 518 Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus²

C 665 Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing²

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

C 1136 Specification for Flexible, Low Permeance Vapors Retarders for Thermal Insulation²

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

E 84 Test Method for Surface Burning Characteristics of Buildings Materials³

E 96 Test Methods for Water Vapor Transmission of Materials²

3. Terminology

3.1 *Definitions*—For definitions of terms defined in this specification, see Terminology C 168.

4. Classification

4.1 Fibrous glass flexible blanket HVAC duct external insulation consists of the following three types:

4.1.1 *Type I*—Blankets without membrane facing.

4.1.2 *Type II*—Blankets faced with a vapor-retarder membrane having a water vapor permeance no higher than 1.30 Perm.

4.1.3 *Type III*—Flexible blankets faced with a vapor-retarder membrane with a water vapor permeance no higher than 0.02 Perm that meet all physical property requirements of Specification C 1136.

5. Ordering Information

5.1 Specific installation, insulation type, thermal resistance, thickness, length, and width suited for the intended use shall be specified by the purchaser.

6. Materials and Manufacture

6.1 *Basic Material*—The basic material shall be fibers made from glass processed from the molten state into fibrous form.

6.2 *Manufacture*—Insulation shall consist of bonded fibers

³ Annual Book of ASTM Standards, Vol 04.07.