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Standard Specification for Flexible Fibrous Glass Insulation for Metal Buildings[1]

This standard is issued under the fixed designation C 991; 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 classification, composition, and physical properties of flexible fibrous glass insulation for use in metal building roofs and walls.

1.2 The basic insulation blanket is designed to be post-processed by a laminating process that applies an adhesive bonded facing.

1.3 The thermal values measured in accordance with this specification for both pre-processed and post-processed insulation are for the insulation only and do not include the effects of air-film surface resistance, changes in mean temperature, or compression of insulation at the framing members of the building, through metal conductance of fasteners and other parallel heat-transfer paths due to design or installation techniques.

1.4 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.5 *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 requirements prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:* [2]

C 167 Test Methods for Thickness and Density of Blanket or Batt Thermal Insulations

C 168 Terminology Relating to Thermal Insulation

C 177 Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus

C 390 Practice for Sampling and Acceptance of Thermal Insulation Lots

C 518 Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus

C 653 Guide for Determination of the Thermal Resistance of Low-Density Blanket-Type Mineral Fiber Insulation

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

C 755 Practice for Selection of Water Vapor Retarders for Thermal Insulation

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

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

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

C 1304 Test Method for Assessing the Odor Emission of Thermal Insulation Materials

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

E 84 Test Method for Surface Burning Characteristics of Building Materials

E 136 Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C

2.2 *Other Referenced Document:*

CAN/ULC-S102 Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies[3]

3. Terminology

3.1 *Definitions*—For definitions of terms relating to insulation, refer to Terminology C 168.

4. Classification

4.1 The flexible fibrous glass insulation is furnished in two types, as follows:

4.1.1 *Type I*—Glass processed from the molten state into fibrous form, bonded with a thermosetting resin, and formed into a blanket or batt.

4.1.2 *Type II*—Type I material supplied with a suitable facing adhered to one surface.

NOTE 1—Facing properties are not part of this specification. The

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

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[2] 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.

[3] Available from Underwriters Laboratories (UL), 333 Pfingsten Rd., Northbrook, IL 60062-2096, http://www.ul.com.