



Standard Specification for Mineral Fiber Blanket Insulation and Blanket-Type Pipe Insulation (Metal-Mesh Covered) (Industrial Type)¹

This standard is issued under the fixed designation C 592; 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.

This standard has been approved for use by agencies of the Department of Defense. This specification replaces HH-I-558B in part.

1. Scope

1.1 This specification covers the composition, dimensions, and physical properties of metal-mesh covered mineral fiber (rock, slag, or glass) blanket and blanket-type pipe insulation (typically on 24 in. (610 mm) diameters or larger) for use on cooled surfaces and on heated surfaces operating at temperatures up to 1200°F (649°C). For specific applications, the actual use temperatures shall be agreed upon between the manufacturer and purchaser.

1.2 The orientation of the fibers within the blanket is primarily parallel to the heated surface. This specification does not cover fabricated pipe and tank wrap insulation where the insulation has been cut and fabricated to provide fiber orientation that is perpendicular to the heated surface.

1.3 For satisfactory performance, properly installed protective vapor retarders shall be used in low temperature applications to prevent movement of water vapor through or around the insulation towards the colder surface.

1.4 See Supplementary Requirements for modifications to paragraphs in this standard when using Specification C 592 in lieu of the United States Department of Defense, Department of Navy, Naval Sea Systems Command, in Washington, DC, Military Specifications No.(s) MIL-I-2818B and MIL-I-2818C.

1.5 The values stated in inch-pound units are to be regarded as the standard. The System International (SI) equivalents of inch-pound units are given in parentheses for information only and may be approximate.

1.6 *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:

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.

Current edition approved Nov. 10, 2000. Published February 2001. Originally published as C 592 – 66T to replace C 263 and C 280. Last previous edition C 592 – 97.

- 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 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 Thermal Insulations²
- 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 680 Practice for Determination of Heat Gain or Loss and the Surface Temperatures of Insulated Pipe and Equipment by the Use of a Computer Program²
- C 1045 Practice for Calculating Thermal Transmission Properties Under Steady-State Conditions²
- C 1058 Practice for Selecting Temperatures for Evaluating and Reporting Thermal Properties of Thermal Insulation²
- C 1104/C 1104M Test Method for Determining the Water Vapor Sorption of Unfaced Mineral Fiber Insulation²
- C 1114 Test Method for Steady-State Thermal Transmission Properties by means of the Thin-Heater Apparatus²
- C 1304 Test Method for Assessing the Odor Emission of Thermal Insulation Materials²
- C 1335 Test Method for Measuring the Non-Fibrous Content of Man-Made Rock and Slag Mineral Fiber Insulation²
- E 84 Test Method for Surface Burning Characteristics of Building Materials³

2.2 Other Referenced Documents:

² Annual Book of ASTM Standards, Vol 04.06.

³ Annual Book of ASTM Standards, Vol 04.07.