



Standard Specification for Fibrous Glass Thermal Insulation and Sound Absorbing Blanket and Board for Military Applications¹

This standard is issued under the fixed designation C 1139; 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 unfaced flexible fibrous glass blanket and faced board used for thermal and sound absorbing insulation at temperatures up to 450°F (232°C) for military applications as a replacement for MIL-I-22023D.

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.

1.3 The following hazard caveat pertains only to the test method section of 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 Blankets or Batt Thermal Insulations²
- C 168 Terminology Relating to Thermal Insulation²
- 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
- C 423 Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method²
- C 518 Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus²
- C 612 Specification for Mineral Fiber Block and Board Thermal Insulation²

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

C 1101/C1101M Test Method for Classifying the Flexibility or Rigidity of Mineral Fiber Blanket and Board Insulation²

E 84 Test Method for Surface Burning Characteristics of Building Materials³

2.2 U.S. Military Standards:

MIL-STD-167-1 Mechanical Vibrations of Shipboard Equipment (Type I Environmental and Type II Internally Excited)⁴

MIL-Y-1140 Yarn, Cord, Sleeving, Cloth and Tape-Glass⁴

MIL-A-3316 Adhesives, Fire Resistant, Thermal Insulation⁴

3. Terminology

3.1 Definitions—Terminology C 168 shall apply to the terms used in this specification.

4. Classification

4.1 The fibrous glass felt shall be of the following types and grades:

Type I, Unfaced Thermal Blanket	Nominal Density, lb/ft ³ (kg/m ³)
Grade 1	0.75 (12)
Grade 2	1.00 (16)
Grade 3	1.50 (24)
Grade 4	2.00 (32)
Grade 5	2.50 (40)
Grade 6	3.00 (48)
Type II, Unfaced Sound Absorbing Blanket	Nominal Density, lb/ft ³ (kg/m ³)
Grade 1	0.75 (12)
Grade 2	1.00 (16)
Grade 3	1.50 (24)
Grade 4	2.00 (32)
Grade 5	2.50 (40)
Grade 6	3.00 (48)
Type III, Faced, Thermal and Sound Absorbing Board	Density shall be 2.8 (45) lb/ft ³ (kg/m ³)

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 Annual Book of ASTM Standards, Vol 04.06.

³ Annual Book of ASTM Standards, Vol 04.07.

⁴ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094.