



Standard Specification for Molded Expanded Perlite Block and Pipe Thermal Insulation¹

This standard is issued under the fixed designation C 610; 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.

1. Scope

1.1 This specification covers molded expanded perlite block, fittings, and pipe thermal insulation intended for use on surfaces with temperatures between 80 to 1200°F (27 to 649°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.

1.3 When the installation or use of thermal insulation materials, accessories, and systems may pose safety or 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 following safety caveat applies only to the test methods portion 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 165 Test Method for Measuring Compressive Properties of 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 203 Test Methods for Breaking Load and Flexural Properties of Block-Type Thermal Insulation²
- C 302 Test Method for Density of Preformed Pipe-Covering-Type Thermal Insulation²
- C 303 Test Method for Density of Preformed Block-Type Thermal Insulation²

C 335 Test Method for Steady-State Heat Transfer Properties of Horizontal Pipe Insulations²

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 421 Test Method for Tumbling Friability of Preformed Block-Type Thermal Insulation²

C 446 Test Method for Breaking Load and Calculated Modulus of Rupture of Preformed Insulation for Pipes²

C 450 Practice for Prefabrication and Field Fabrication of Thermal Insulating Fitting Covers for NPS Piping, Vessel Lagging, and Dished Head Segments²

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

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

C 692 Test Method for Evaluating the Influence of Thermal Insulations on the External Stress Corrosion Cracking Tendency of Austenitic Steel²

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

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

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

E 84 Test Method for Surface Burning Characteristics of Building Materials³

3. Terminology

3.1 *General*—Terminology C 168 shall be considered as applying to the terms used in this specification.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *composition*—molded expanded perlite block, fitting, and pipe thermal insulation shall be composed principally of

¹ This specification is under the jurisdiction of ASTM Committee C-16 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.

