



Designation: C 390 – 03

## Standard Practice for Sampling and Acceptance of Thermal Insulation Lots<sup>1</sup>

This standard is issued under the fixed designation C 390; 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 ( $\epsilon$ ) 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 standard provides criteria for establishing the acceptability of lots of shipments of preformed board, preformed block and pipe, and batts and blanket thermal insulation based on sampling and inspection.

1.2 This standard is intended for use in conjunction with appropriate ASTM material specifications that classify and describe the specific physical requirements for the product in terms of qualification requirements and inspection requirements. Determination of nonconformity shall be based on the tolerances for individual sample test values prescribed in the material specification.

1.3 This standard may require inspection substantially different from that performed in the normal course of production. If the purchaser requires sampling and acceptance inspection in accordance with this practice, he shall so specify in the order or contract.

1.4 *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 168 Terminology Relating to Thermal Insulation<sup>2</sup>

#### 2.2 U.S. Military Standard:

MIL-STD-105E Sampling Procedures and Tables for Inspection by Attributes<sup>3</sup>

### 3. Terminology

#### 3.1 Definitions:

3.1.1 *acceptable quality level (AQL)*—when a continuous series of lots is considered, the quality level which for purposes

of sampling inspection is the limit of a satisfactory process average. The listed AQL (AQL=10%) is the maximum percent defective level accepted 95% of the time by the sampling plan.

3.1.2 *acceptance number*—the maximum number of the nonconformities or nonconforming units in the sample that will permit acceptance of the inspected lot or batch.

3.1.3 *inspection*—the process of measuring, examining, testing, gaging, or otherwise comparing the unit with the applicable requirements.

3.1.4 *inspection lot*—a collection of units of product from which a sample is drawn and inspected to determine conformance with the acceptability criteria.

3.1.4.1 *Discussion*—An inspection lot may differ from a lot defined for other purposes.

3.1.5 *inspection, normal*—inspection that is used in accordance with an acceptance sampling scheme when a process is considered to be operating at, or slightly better than, its acceptable quality level.

3.1.6 *inspection, tightened*—a feature of a sampling scheme using stricter acceptance criteria than those used in normal inspection. Tightened inspection is used in some sampling schemes as a protective measure to increase the probability of rejecting lots when experience shows the level of submitted quality has deteriorated significantly.

3.1.6.1 *Discussion*—It is expected that the higher rate of rejections inherent with tightened inspection will lead the supplier to improve the quality of the submitted product. The criteria for determining when quality has deteriorated significantly must be defined in objective terms for any given sampling scheme.

3.1.7 *lot (batch)*—a definite quantity of some product manufactured under conditions of production that are considered uniform.

3.1.8 *lot size*—the number of units in a lot or inspection lot.

3.1.9 *nonconforming unit*—a unit of product or service containing at least one nonconformity.

3.1.10 *nonconformity*—a departure of a quality characteristic from its intended level or state that occurs with a severity sufficient to cause the product or service not to meet a specification requirement.

<sup>1</sup> This practice is under the jurisdiction of ASTM Committee C16 on Thermal Insulation and is the direct responsibility of Subcommittee C16.31 on Chemical and Physical Properties.

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<sup>2</sup> *Annual Book of ASTM Standards*, Vol 04.06.

<sup>3</sup> Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.