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## *Standard Specifications for* CELLULAR GLASS INSULATING BLOCK<sup>1</sup>



ASTM Designation: C 343 - 56

ADOPTED, 1956.<sup>2</sup>

This Standard of the American Society for Testing Materials is issued under the fixed designation C 343; the final number indicates the year of original adoption as standard or, in the case of revision, the year of last revision.

### Scope

1. These specifications cover the composition, sizes, dimensions, and physical properties of cellular glass block intended for thermal insulation, for use on surfaces operating at temperatures between -300 and +800 F. For specific applications, the actual temperature limit shall be agreed upon between the manufacturer and the purchaser.

### Definitions

2. The Standard Definitions of Terms Relating to Thermal Insulating Materials (ASTM Designation: C 168)<sup>3</sup> shall be considered as applying to the terms used in these specifications.

### Composition and Manufacture

3. Cellular glass insulating block shall consist of true glass compositions of high durability, processed by fusion, comprising a homogeneous rigid cellular mass of hermetically sealed

cells. These materials shall be cellularized, annealed, and trimmed into blocks of standard dimensions of commercial sizes.

### Physical Requirements

4. The insulation shall conform to the following physical requirements:

Density (average), lb per cu ft . . . . .	8 to 10
Thermal conductivity (average), max, Btu in. per hr sq ft deg Fahr:	
At mean temperature of 0 . . . . .	0.35
At mean temperature of 50 . . . . .	0.38
At mean temperature of 300 . . . . .	0.55
Flexural strength (average), min, psi	75.00
Compressive strength (average), min, psi . . . . .	100.00
Water absorption (average), max, per cent by volume . . . . .	0.2

### Standard Dimensions

5. The dimensions of standard block shall be as follows:

Widths, in. . . . .	6 and 12
Length, in. . . . .	18
Thicknesses, in. . . . .	1½, 2, 2½, 3, 4, and 5

### Dimensional Tolerances

6. The average measured length, width, and thickness shall not differ from the standard dimensions by more than  $\pm \frac{1}{16}$  in. The blocks shall not be out of square more than  $\frac{1}{16}$  in. per ft.

<sup>1</sup> Under the standardization procedure of the Society, these specifications are under the jurisdiction of the ASTM Committee C-16 on Thermal Insulating Materials.

<sup>2</sup> Prior to adoption as standard, these specifications were published as tentative from 1954 to 1956.

<sup>3</sup> 1961 Book of ASTM Standards, Part 5.