

**REFERENCED STANDARDS**

inch (3.2 mm) from the specified standard dimensions. On faces that are split, overall dimensions will vary. Local suppliers should be consulted to determine dimensional tolerances achievable.

- For slumped units, no overall height dimension shall differ by more than 1/8 inch (3.2 mm) from the specified standard dimension. On faces that are slumped, overall dimensions will vary. Local suppliers should be consulted to determine dimension tolerances achievable.

**Note:** Standard dimensions of units are the manufacturer’s designated dimensions. Nominal dimensions of modular size units, except slumped units, are equal to the standard dimensions plus 3/8 inch (9.5 mm), the thickness of one standard mortar joint. Slumped units are equal to the standard dimensions plus 1/2 inch (13 mm), the thickness of one standard mortar joint. Nominal dimensions of nonmodular size units usually exceed the standard dimensions by 1/8 inch to 1/4 inch (3.2 mm to 6.4 mm).

**Section 21.407 — Visual Inspection**

All units shall be sound and free of cracks or other defects that would interfere with the proper placing of the unit or impair the strength or permanence of the construction. Units may have minor cracks incidental to the usual method of manufacture, or minor chipping resulting from customary methods of handling in shipment and delivery.

Units that are intended to serve as a base for plaster or stucco shall have a sufficiently rough surface to afford a good bond.

Where units are to be used in exposed wall construction, the face or faces that are to be exposed shall be free of chips, cracks or other imperfections when viewed from 20 feet (6100 mm),

except that not more than 5 percent of a shipment may have slight cracks or small chips not larger than 1 inch (25.4 mm).

**Section 21.408 — Methods of Sampling and Testing**

The purchaser or authorized representative shall be accorded proper facilities to inspect and sample the units at the place of manufacture from the lots ready for delivery.

Sample and test units in accordance with ASTM C 140.

Total linear drying shrinkage shall be based on tests of concrete masonry units made with the same materials, concrete mix design, manufacturing process and curing method, conducted in accordance with ASTM C 426 and not more than 24 months prior to delivery.

**Section 21.409 — Rejection**

If the samples tested from a shipment fail to conform to the specified requirements, the manufacturer may sort it, and new specimens shall be selected by the purchaser from the retained lot and tested at the expense of the manufacturer. If the second set of specimens fails to conform to the specified requirements, the entire lot shall be rejected.

**TABLE 21-4-A  
MOISTURE CONTENT REQUIREMENTS FOR TYPE I UNITS**

| LINEAR SHRINKAGE, PERCENT | MOISTURE CONTENT, MAX. PERCENT OF TOTAL ABSORPTION<br>(Average of 3 Units) |                           |                   |
|---------------------------|--|---------------------------|-------------------|
|                           | Humidity Conditions at Job site or Point of Use                            |                           |                   |
|                           | Humid <sup>1</sup>   | Intermediate <sup>2</sup> | Arid <sup>3</sup> |
| 0.03 or less              | 45   | 40                        | 35                |
| From 0.03 to 0.045        | 40   | 35                        | 30                |
| 0.045 to 0.065, max.      | 35   | 30                        | 25                |

<sup>1</sup>Average annual relative humidity above 75 percent.  
<sup>2</sup>Average annual relative humidity 50 to 75 percent.  
<sup>3</sup>Average annual relative humidity less than 50 percent.

**TABLE 21-4-B  
STRENGTH AND ABSORPTION REQUIREMENTS**

| COMPRESSIVE STRENGTH, MIN, psi (MPa) |                 | WATER ABSORPTION, MAX, lb./ft. (kg/m) (Average of 3 Units)        |   |                                      |
|--------------------------------------|-----------------|---|---|--------------------------------------|
| Average Net Area                     |                 | Weight Classification—Oven-dry Weight of Concrete, lb./ft. (kg/m) |   |                                      |
| Average of 3 Units                   | Individual Unit | Lightweight,<br>Less than 105 (1680)                              | Medium Weight,<br>105 to less than 125<br>(1680–2000) | Normal Weight,<br>125 (2000) or more |
| 1900 (13.1)                          | 1700 (11.7)     | 18 (288)  | 15 (240)  | 13 (208)                             |