



Standard Terminology of Building Constructions¹

This standard is issued under the fixed designation E 631; 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.

ε¹ NOTE—Definitions from other E6 standards were editorially incorporated into this standard in August 2000.

1. Scope

1.1 This standard consists of terms and definitions pertaining to the field of buildings, and in particular, terms related to the standards generated by ASTM Committee E-6 on Performance of Buildings.

1.2 The purpose of this Terminology is to provide meanings and explanations of technical terms in the buildings field, written for both the non-expert and the expert user.

1.3 This comprehensive Terminology standard contains all ASTM standardized definitions generated in ASTM Committee E-6. There are also subsidiary terminology standards. These special classes of terminology are grouped for convenient use (see Section 2). Some subsidiary terminology standards appear in this comprehensive standard.

1.4 Terms are listed in alphabetical sequence. Compound terms appear in the natural spoken order. To show the relationships in certain families of concepts, groups of narrower terms and their definitions are grouped under the definition of the broader term. Each such sub-entry is listed also (*in italics*) with a cross-reference to the special class.

1.5 Certain standard definitions herein are adopted from other sources. Each is an exact copy. The source is identified at the right margin following the definition, and is listed in Section 2.

2. Referenced Documents

2.1 ASTM Standards:

- C 168 Terminology Relating to Thermal Insulating Materials²
- C 755 Practice for Selection of Vapor Retarders for Thermal Insulation²
- E 96 Test Method for Water Vapor Transmission of Materials²

¹ This terminology is under the jurisdiction of ASTM Committee E-6 on Performance of Buildings and is the direct responsibility of Subcommittee E06.94 on Terminology and Editorial.

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Those terms formerly contained in Definitions E 540 – 77 are now contained in this terminology.

² Annual Book of ASTM Standards, Vol 04.06.

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3. Terminology

3.1 Symbols:

- a—height of cantilevered shear wall, in metres (feet).
- b—length of cantilevered shear wall, in metres (feet).
- C—initial length of the diagonal $\sqrt{a^2 + b^2}$, in metres (feet).
- δ—diagonal elongation, in millimetres (inches).
- Δ—total horizontal displacement of the top of the wall measured with respect to the test apparatus, in millimetres (inches). This value includes effects due to panel rotation, translation, and shear.
- E—modulus of elasticity of flange or web material, depending upon which material is held constant in a transformed section analysis, psi (or MPa)
- G—shear modulus of the web material, psi (or MPa)
- G'—shear stiffness of the diaphragm obtained from test (includes shear deformation factor for the connection system), lbf/in. (or N/mm)
- G—shear stiffness obtained from test, in newtons per metre (pound-force per inch).
- G'—global shear stiffness, includes rotation and translational displacements as well as diaphragm shear displacement.
- G'_{int}—internal shear stiffness, includes only the shear displacement of the wall in calculation.
- I—moment of inertia of the transformed section of the diaphragm based on webs or flanges, in.⁴ (or mm⁴)
- L—total span of a simply supported diaphragm, in. (or mm)
- P—concentrated load, lbf (or N)
- P—concentrated load applied at the top edge of the wall at the selected reference displacement, in newtons (pound-force).
- P_u—highest load level held long enough to record gage measurements, in newtons (pound-force).
- R_u—maximum diaphragm reaction, lbf (or N)
- S_u—ultimate shear strength of the diaphragm, lbf/ft (or N/m)
- a—span length of cantilever diaphragm, in. (or mm)
- b—depth of diaphragm, in. (or mm)
- t—thickness of web material, in. (or mm)
- w—uniform load, lbf/in. (or N/mm)

³ Annual Book of ASTM Standards, Vol 04.11.

