

Section 5.1. General

5.1.1. Scope

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- 1) This Part is concerned with
 - a) the control of condensation
 - i) in *building* components and assemblies, and
 - ii) on *building* materials, components and assemblies, and
 - b) the transfer of heat, air, moisture and sound through
 - i) *building* materials, components and assemblies, and
 - ii) interfaces between *building* materials, components and assemblies.

(See Note A-5.1.1.1.(1).)

5.1.2. Application

5.1.2.1. Exposure to Exterior Space or the Ground and Separation of Dissimilar Environments

- 1) This Part applies, as described in Subsection 1.3.3. of Division A, to
 - a) *building* materials, components and assemblies exposed to exterior space or the ground, including those separating interior space from exterior space or separating interior space from the ground,
 - b) *building* materials, components and assemblies separating environmentally dissimilar interior spaces (see Note A-5.8.), and
 - c) site materials, components, assemblies and grading that may affect environmental loads on *building* materials, components and assemblies exposed to exterior space or the ground.

(See Note A-5.1.2.1.(1).)

5.1.3. Definitions

5.1.3.1. Defined Words

- 1) Words that appear in italics are defined in Article 1.4.1.2. of Division A.

5.1.4. Resistance to Loads and Deterioration

5.1.4.1. Structural and Environmental Loads

(See Note A-5.1.4.1.)

- 1) *Building* materials, components and assemblies that separate dissimilar environments or are exposed to the exterior shall have sufficient capacity and integrity to resist or accommodate
 - a) all environmental loads, and effects of those loads, that may reasonably be expected having regard to
 - i) the intended use of the *building*, and
 - ii) the environment to which the materials, components and assemblies are subject, and
 - b) all structural loads, and effects of those loads, that may reasonably be expected.
- 2) Where *building* materials, components or assemblies perform more than one function, they shall satisfy the requirements of all of those functions. (See Note A-5.1.4.1.(2).)
- 3) Compliance with Clause (1)(a) shall be demonstrated by design complying with Subsection 5.2.1. and construction conforming to that design.
- 4) Compliance with Clause (1)(b) shall be demonstrated by design complying with Subsection 5.2.2., and construction conforming to that design, with regard to

- a) materials, components and assemblies, and associated loads, that are identified in Part 4,
- b) air pressure loads imposed on *air barrier systems*,
- c) wind up-lift imposed on roofing, and
- d) hydrostatic pressure imposed on the means of protection from moisture in the ground.

5) For materials, components, assemblies and loads to which Sentence (4) does not apply, compliance with Clause (1)(b) shall be demonstrated

- a) by design complying with Subsection 5.2.2. for individual applicable loads and construction conforming to that design, or
- b) in the case of common materials, components and assemblies, and their installation, by proven past performance over a period of several years for individual applicable loads.

(See Note A-5.1.4.1.(5).)

6) Materials, components and assemblies separating dissimilar environments and assemblies exposed to the exterior, including their connections, that are subject to structural loads as defined in Article 5.2.2.1., shall

- a) transfer such loads to the *building* structure without adverse effects on the performance of other materials, components or assemblies,
- b) not deflect to a degree that adversely affects the performance of other materials, components or assemblies (see Note A-5.1.4.1.(6)(b) and (c)), and
- c) be designed, and constructed according to that design, to accommodate (see Note A-5.1.4.1.(6)(b) and (c))
 - i) the maximum relative structural movement that may reasonably be expected, and
 - ii) construction tolerances that may be reasonably expected.

(See Article 4.1.3.5., Sentence 4.1.3.3.(2) and Subsection 4.1.8. for information on different types of structural movements.) (See Note A-5.1.4.1.)

5.1.4.2. Resistance to Deterioration

(See Note A-5.1.4.2.)

1) Except as provided in Sentence (2), materials used in *building* components and assemblies that separate dissimilar environments, or in assemblies exposed to the exterior, shall be

- a) compatible with adjoining materials, and
- b) resistant to any mechanisms of deterioration that may reasonably be expected, given
 - i) the nature and function of the materials, and
 - ii) the exposure and climatic conditions in which they will be installed.

2) Material compatibility and deterioration resistance are not required where it can be shown that incompatibility or uncontrolled deterioration will not adversely affect any of

- a) the health or safety of *building* users,
- b) the intended use of the *building*, or
- c) the operation of *building* services.

5.1.5. Reserved