Designation: C717 – 19

Standard Terminology of Building Seals and Sealants[1]

This standard is issued under the fixed designation C717; 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.

1. Scope

1.1 This standard describes terms and definitions and descriptions of terms used in test methods, specifications, guides, and practices (related to building seals and sealants) consistent with the scope and areas of interest of ASTM Committee C24.

1.2 Definitions and descriptions of terms are written to ensure that building seals and sealants standards are properly understood and interpreted.

1.3 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

A644 Terminology Relating to Iron Castings
C509 Specification for Elastomeric Cellular Preformed Gasket and Sealing Material
C542 Specification for Lock-Strip Gaskets
C716 Specification for Installing Lock-Strip Gaskets and Infill Glazing Materials
C797 Practices for Use of Oil- and Resin-Based Putty and Glazing Compounds (Withdrawn 2002)[3]
C961 Test Method for Lap Shear Strength of Sealants
C964 Guide for Lock-Strip Gasket Glazing
C1021 Practice for Laboratories Engaged in Testing of Building Sealants
C1193 Guide for Use of Joint Sealants
D883 Terminology Relating to Plastics
D1079 Terminology Relating to Roofing and Waterproofing
D1565 Specification for Flexible Cellular Materials--Vinyl Chloride Polymers and Copolymers (Open-Cell Foam) (Withdrawn 1998)[3]
D1566 Terminology Relating to Rubber
D2102 Test Method for Shrinkage of Textile Fibers (Bundle Test)
E631 Terminology of Building Constructions

3. Significance and Use

3.1 *Definitions:*

3.1.1 Terms and their related standard definitions in Section 4 are intended for use uniformly and consistently in all building seals and sealants test methods, specifications, guides, and practices. The purpose of such use is to promote a clear understanding and interpretation of the standards in which they are used.

3.1.2 Definitions of terms are written in the broadest sense possible, consistent with the intended meaning. Definitions have not been limited to a specific technical field when they can have a multi-field application.

3.1.3 The definition of a term that can have different meanings in different technical fields is preceded by a phrase limiting it to the specific field intended, that is, "in building construction."

3.2 *Description of Terms:*

3.2.1 Descriptions of Terms are special purpose definitions intended to provide a precise understanding and interpretation of the seals and sealants standards in which they are used.

3.2.2 A specific description of a term is applicable to the standard or standards in which the term is described and used.

3.2.3 Each standard in which a term is used, in a specially defined manner, should list the term and its description under the subheading, descriptions of terms.

4. Terminology

4.1 *Terms and Definitions:*

adhesive failure, *n—in building construction*, failure of the bond between a sealant and a substrate.

DISCUSSION—This definition pertains to interfacial adhesive failure, a lack of bond at the interface between the materials. Interphasal

[1] This terminology is under the jurisdiction of ASTM Committee C24 on Building Seals and Sealants and is the direct responsibility of Subcommittee C24.01 on Terminology of Building Seals and Sealants.

The boldface designations refer to the original source of the definition and the ASTM Technical Committee having jurisdiction.

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[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[3] The last approved version of this historical standard is referenced on www.astm.org.

adhesive failure, within the sealant or substrate near the interface, is less common and may appear to be interfacial without the use of magnification.

adhesion failure, *n*—use **adhesive failure** (preferred term).

aerosol container, empty, *n—in building construction*, an aerosol container is considered empty when the product flow reaches 0.5 g per second or less.

back bedding, *n*—See **bedding**.
back putty, *n*—See **bedding**.
back-up material—See **sealant backing**.

bead, *n—in building construction*, in sealants and glazing, a strip of applied sealant, glazing compound, or putty.

bed, *v—in building construction in glazing*, to apply a bead of sealant between a lite of glass or a panel and the stationary stops or sight bars of the sash or frame.

bed, *n*—See **bedding.**

bedding, *n—in building construction in glazing,* a bead of sealant applied between a lite of glass or a panel and the stationary stop or sight bar of the sash or frame. It is usually the first bead to be applied when setting glass or panels.

bite, *n—in building construction in glazing*, the effective structural contact dimension of a structural sealant. (See Fig. 1 and Fig. 2.)

bloom, *n—in building construction*, a substance formed by blooming.

blooming, *v—in building construction*, movement or diffusion of a component such as a plasticizer, monomer, unreacted polymer or other formulation ingredient to a seal or sealant surface.

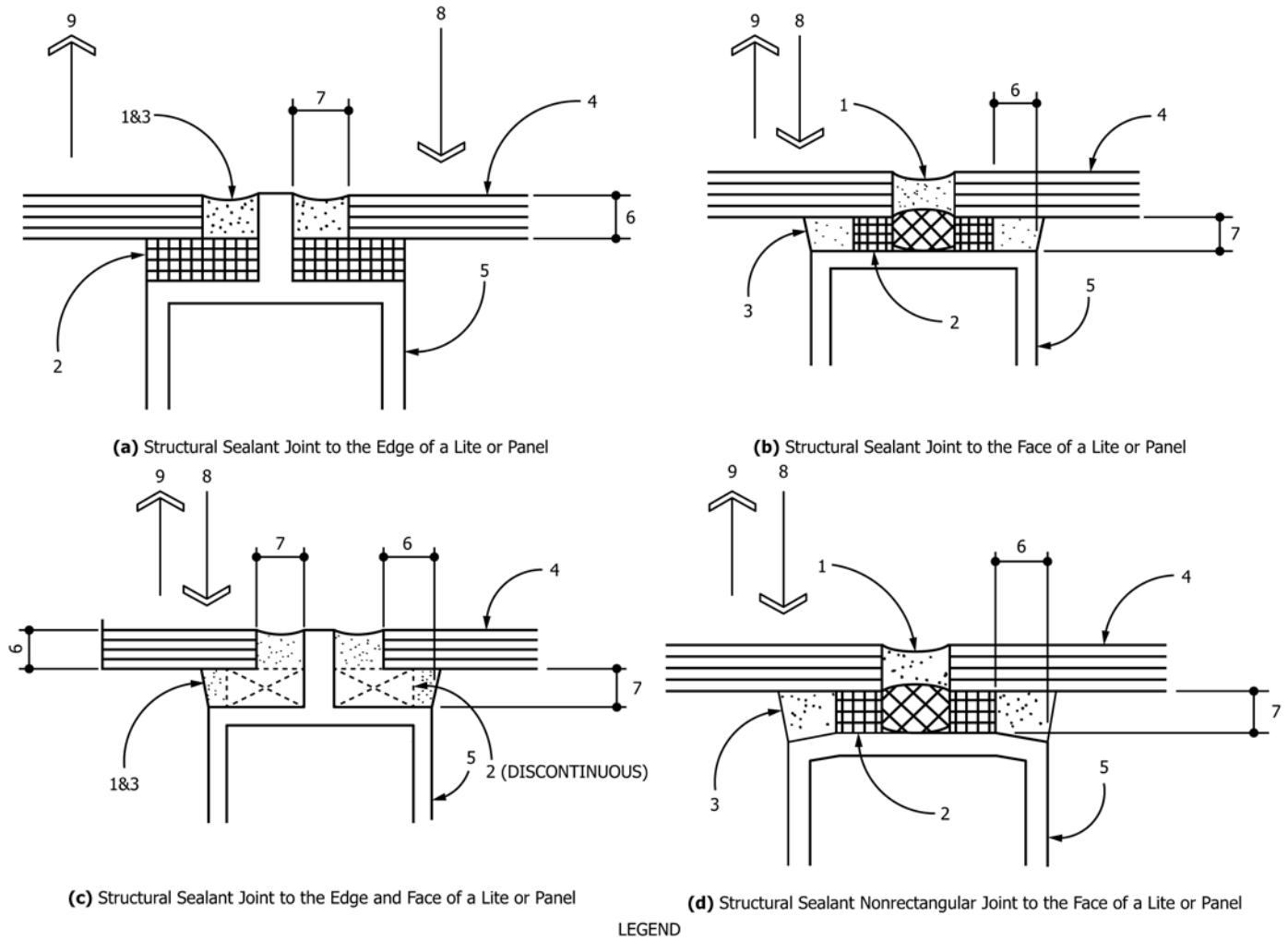
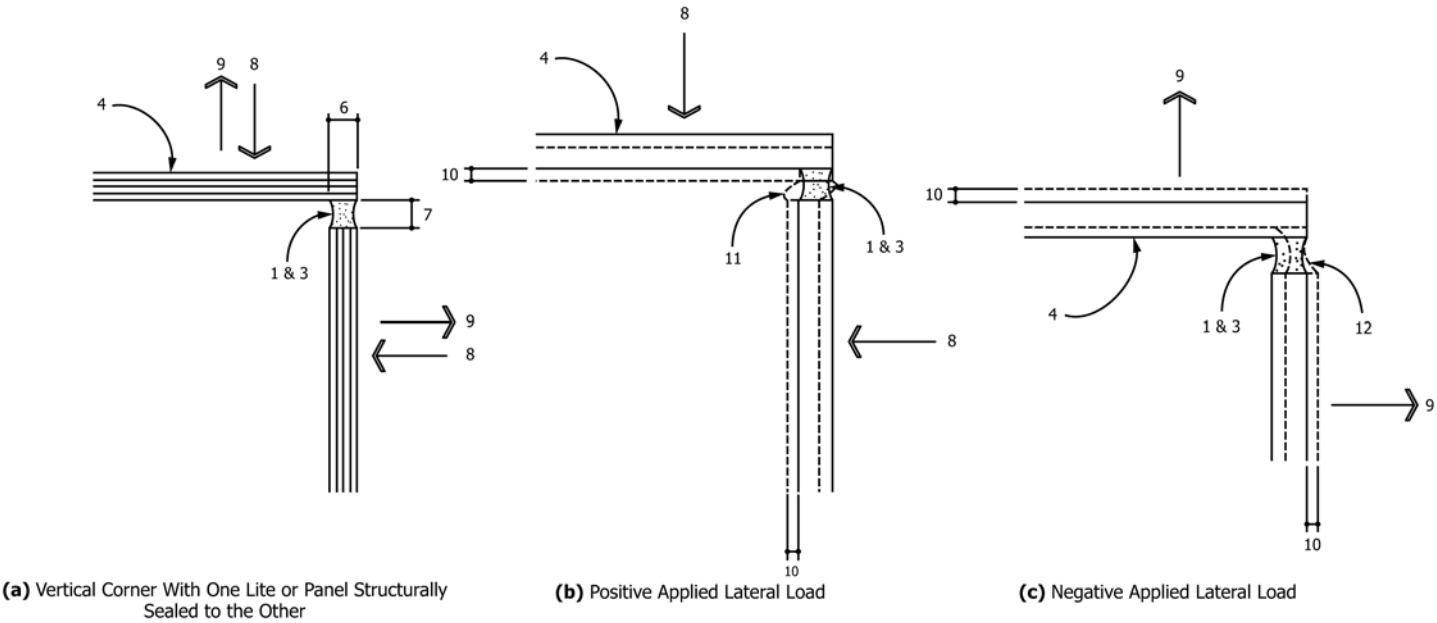


FIG. 1 Typical Structural Sealant Joint Configurations



(a) Vertical Corner With One Lite or Panel Structurally Sealed to the Other

(b) Positive Applied Lateral Load

(c) Negative Applied Lateral Load

FIG. 2 Applied Load Transfer at a Vertical Corner Structural Sealant Joint (see Fig. 1 for Legend)

bond breaker—*in building construction,* a material to prevent adhesion at a designated interface.Fig. 3.)

caulk, *v—in building construction*, to install or apply a sealant across or into a joint, crack, or crevice.

caulk, *n*—See **sealant.**
caulking, *n*—See **sealant.**
caulking compound, *n*—See **sealant.**

cell, *n*—a single small cavity surrounded partially or completely by walls. **D1566; D11**

cellular material, *n*—a generic term for materials containing many cells (either open, closed, or both) dispersed through the mass. **D1565, D1566; D11**

chalk, *n—in building construction*, a powder formed by chalking

DISCUSSION—The powder is not necessarily white.

chalking, *v—in building construction*, formation of a powder on the surface of a sealant that is caused by the disintegration of the polymer or binding medium due to weathering.

DISCUSSION—Chalk on a light color sealant is often white, however a darker color can also exhibit chalking.

closed cell, *n*—a cell totally enclosed by its walls and hence not interconnecting with other cells. **D883; D20**

closed cell material, *n*—a cellular material in which substantially all cells in the mass are closed cells.

cohesive failure, *n—in building construction*, failure characterized by rupture within the sealant, adhesive, or coating.

compatibility, *n—in building construction*, the capability of two or more materials to be placed in contact, or near enough to interact, with no detrimental results.

compatible materials, *n*—See **compatibility**.

compound, *n*—an intimate mixture of all the ingredients necessary for a finished material or product.

crazed, *adj—in building construction*, having a random network of cracks in a sealant surface which do not penetrate through the body of the material.

crazed, *adj—in building construction*, exhibiting crazing.

crazing, *n—in building construction*, a network of fine cracks in the surface of a sealant.

DISCUSSION—Crazing may or may not affect product performance.

crazing, *v—in building construction,* the formation of a network of random surface cracks in a sealant.

creep, *n*—the time dependent part of a strain resulting from stress. **D1079; D08**

cure, *v—in building construction*, to attain the intended performance properties of a compound by means of evaporation, chemical reaction, heat, radiation, or combinations thereof.

cure, *n—in building construction*, the process by which a compound attains its intended performance properties by means of evaporation, chemical reaction, heat, radiation, or combinations thereof.

cure time, functional, *n—in building construction*, the period between application and the point in time that a sealant attains properties necessary to perform a specific function or in a given application.

DISCUSSION—Functional cure time does not imply complete development of chemical, physical, or mechanical properties.

cure time, laboratory, *n—in building construction*, the period between application and the point in time when laboratory testing of a sealant begins as set forth in the procedure of a test method.