



Designation: C1481 – 00 (Reapproved 2006)

Standard Guide for Use of Joint Sealants with Exterior Insulation and Finish Systems (EIFS)¹

This standard is issued under the fixed designation C1481; 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 guide describes the use of single and multi-component, cold-applied joint sealants, or pre-cured sealant systems for joint sealing applications, or both, in buildings using exterior insulation and finish systems (EIFS) on one or both sides of the joint. Refer to 10.1 for joint seal geometries.

1.2 The elastomeric sealants described by this guide meet the requirements of Specifications C834, C920, or C1311.

1.3 The values stated in SI units are to be regarded as the standard. The values given in parentheses are provided for information only.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.* For specific hazard statements, see Notes 1 and 2.

1.5 There are no ISO standards similar or equivalent to this ASTM standard.

2. Referenced Documents

2.1 *ASTM Standards:*²

C717 Terminology of Building Seals and Sealants

C719 Test Method for Adhesion and Cohesion of Elastomeric Joint Sealants Under Cyclic Movement (Hockman Cycle)

C794 Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants

C834 Specification for Latex Sealants

C920 Specification for Elastomeric Joint Sealants

C1193 Guide for Use of Joint Sealants

C1299 Guide for Use in Selection of Liquid-Applied Sealants

C1311 Specification for Solvent Release Sealants

C1382 Test Method for Determining Tensile Adhesion Properties of Sealants When Used in Exterior Insulation and Finish Systems (EIFS) Joints

C1397 Practice for Application of Class PB Exterior Insulation and Finish Systems (EIFS) and EIFS with Drainage

C1472 Guide for Calculating Movement and Other Effects When Establishing Sealant Joint Width

2.2 *ANSI Standard:*

American National Standard for Exterior Insulation and Finish Systems (EIFS)³

3. Terminology

3.1 *Definitions:*

3.1.1 Refer to Terminology C717 for definitions of the following terms used in this guide: *bicellular sealant backing, bond breaker, bridge sealant joint, butt sealant joint, chemically curing sealant, closed cell sealant backing, compatibility, compatible materials, cure, elastomeric, elongation, fillet sealant joint, joint, lap sealant joint, latex sealant, modulus, non-sag sealant, open cell sealant backing, primer, seal, sealant, sealant backing, shelf-life, solvent-release sealant, shrinkage, substrate, tooling, tooling time, working life (pot life).*

3.1.2 Refer to Terminology C1397 for definitions of the following terms used in this guide: *accessories, base coat, cure, dry, durability, embed, expansion joint, exterior insulation and finish system (EIFS), finish coat, lamina, nonmetallic reinforcing mesh, primers, reinforced base coat, substrate, texture, thermal insulation board, wrap, wrapping.*

4. Significance and Use

4.1 The intent of this guide is to provide information and guidelines for the selection of materials for joint seals in, or adjacent to, EIFS.

¹ This guide is under the jurisdiction of ASTM Committee C24 on Building Seals and Sealants and is the direct responsibility of Subcommittee C24.10 on Specifications, Guides and Practices.

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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 Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036.

4.2 Joints need to be designed for the expected movements and construction tolerances so an appropriate joint width can be established.

DESIGN CONSIDERATIONS

5. General

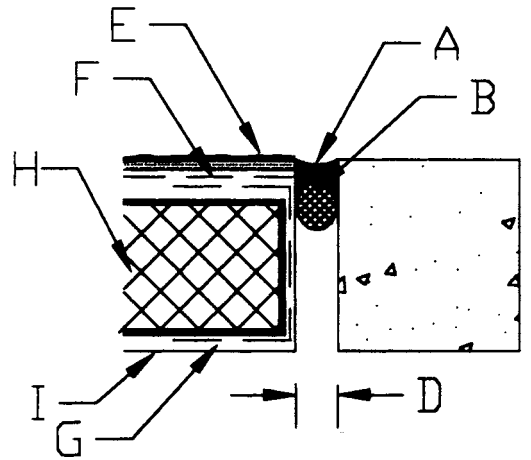
5.1 The major components of a joint seal in, or adjacent to, EIFS that should be considered when selecting or using sealants are as follows: EIFS substrate, primer, sealant backing or bond-breaker, and sealant (see Figs. 1-11).

6. EIFS Substrate

6.1 *Joint Location and Configuration*—In an EIFS-clad building, sealant joints typically are required at the following locations:

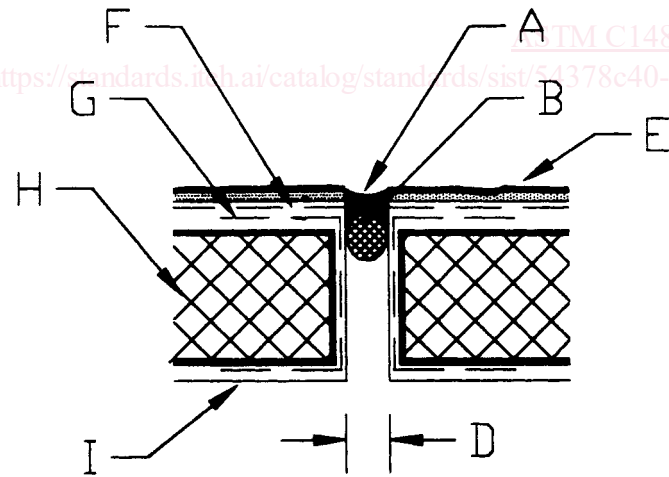
- 6.1.1 At the floor line of multi-level wood frame construction;
- 6.1.2 At an existing building expansion joint;
- 6.1.3 Where dissimilar substrates are bridged;
- 6.1.4 When an EIFS abuts dissimilar building construction;
- 6.1.5 Some EIFS manufacturers may require joints in long continuous elevations;
- 6.1.6 The size and location of joints is the responsibility of the design professional and shall be consistent with the project conditions and guidelines of the EIFS manufacturer.

6.1.7 *Joint Configuration*—Industry accepted minimum joint width is 19 mm (3/4 in.) with sufficient depth to accommodate the sealant backing and sealant material. Lesser joint widths may be allowable where EIFS abuts adjacent materials. Consider the sealant manufacturer’s published sealant move-



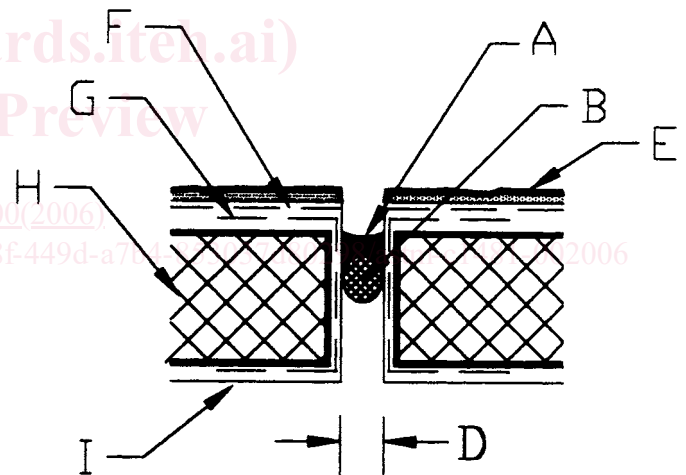
- Legend
- A. Sealant
 - B. Sealant Backing
 - C. Bond Breaker
 - D. Joint
 - E. Textured Finish
 - F. Reinforcing Mesh Embedded in Base Coat
 - G. Backwrap Mesh Around Insulation Board
 - H. Insulation Board
 - I. Adhesive (If Applicable)

FIG. 2 Sealant Butt Joint Seal (EIFS to Dissimilar Substrates)



- Legend
- A. Sealant
 - B. Sealant Backing
 - C. Bond Breaker
 - D. Joint
 - E. Textured Finish
 - F. Reinforcing Mesh Embedded in Base Coat
 - G. Backwrap Mesh Around Insulation Board
 - H. Insulation Board
 - I. Adhesive (If Applicable)

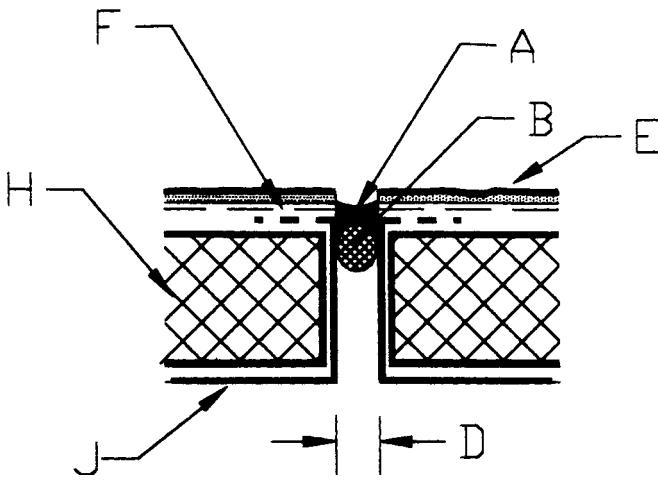
FIG. 1 Sealant Butt Joint Seal (EIFS to EIFS)



- Legend
- A. Sealant
 - B. Sealant Backing
 - C. Bond Breaker
 - D. Joint
 - E. Textured Finish
 - F. Reinforcing Mesh Embedded in Base Coat
 - G. Backwrap Mesh Around Insulation Board
 - H. Insulation Board
 - I. Adhesive (If Applicable)

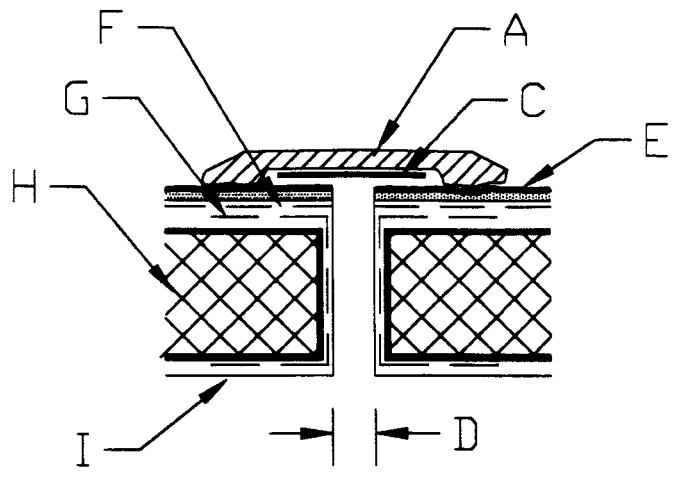
FIG. 3 Recessed Sealant Butt Joint Seal (EIFS to EIFS)

ment capability when determining the appropriate joint width. Refer to Guide C1472. Good architectural practice calls for joint designs that allow for construction tolerances and material variations.



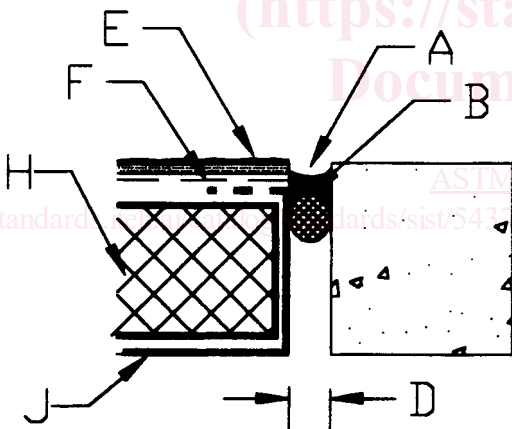
- Legend
- A. Sealant
 - B. Sealant Backing
 - C. Bond Breaker
 - D. Joint
 - E. Textured Finish
 - F. Reinforcing Mesh Embedded in Base Coat
 - G. Backwrap Mesh Around Insulation Board
 - H. Insulation Board
 - I. Adhesive (If Applicable)
 - J. Trim Accessory

FIG. 4 Sealant Butt Joint Seal (Accessory to Accessory)



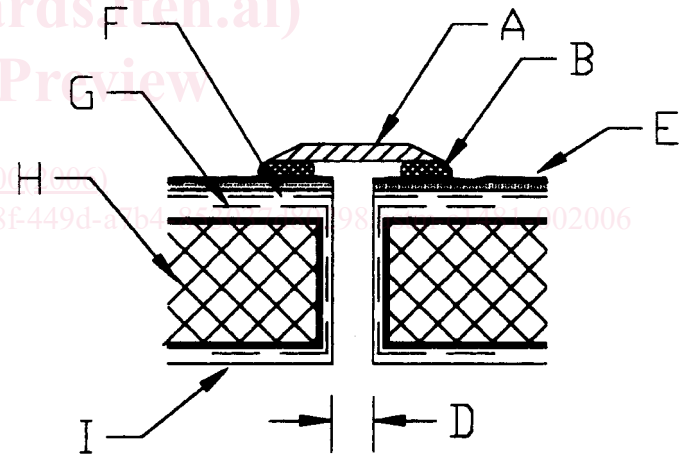
- Legend
- A. Sealant
 - B. Sealant Backing
 - C. Bond Breaker
 - D. Joint
 - E. Textured Finish
 - F. Reinforcing Mesh Embedded in Base Coat
 - G. Backwrap Mesh Around Insulation Board
 - H. Insulation Board
 - I. Adhesive (If Applicable)

FIG. 6 Sealant Bridge Joint Seal Using Liquid—Applied Sealant and Bond Breaker



- Legend
- A. Sealant
 - B. Sealant Backing
 - C. Bond Breaker
 - D. Joint
 - E. Textured Finish
 - F. Reinforcing Mesh Embedded in Base Coat
 - G. Backwrap Mesh Around Insulation Board
 - H. Insulation Board
 - I. Adhesive (If Applicable)
 - J. Trim Accessory

FIG. 5 Sealant Butt Joint Seal (Accessory to Dissimilar Substrate)



- Legend
- A. Sealant
 - B. Sealant Backing
 - C. Bond Breaker
 - D. Joint
 - E. Textured Finish
 - F. Reinforcing Mesh Embedded in Base Coat
 - G. Backwrap Mesh Around Insulation Board
 - H. Insulation Board
 - I. Adhesive (If Applicable)

FIG. 7 Sealant Bridge Joint Seal Using Precured Sealant

6.2 EIFS Installation—The EIFS manufacturer’s recommended installation procedures should be followed at all times.

6.2.1 Practice C1397 provides a minimum requirement for the application of Class PB EIFS.