



Standard Guide for Calculating Movement and Other Effects When Establishing Sealant Joint Width¹

This standard is issued under the fixed designation C1472; 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 provides information on performance factors such as movement, construction tolerances, and other effects that should be accounted for to properly establish sealant joint size. It also provides procedures to assist in calculating and determining the required width of a sealant joint enabling it to respond properly to those movements and effects. Information in this guide is primarily applicable to single- and multi-component, cold-applied joint sealants and secondarily to precured sealant extrusions when used with properly prepared joint openings and substrate surfaces.

1.2 Although primarily directed towards the understanding and design of sealant joints for walls for buildings and other areas, the information contained herein is also applicable to sealant joints that occur in horizontal slabs and paving systems as well as various sloped building surfaces.

1.3 This guide does not describe the selection and properties of joint sealants **(1)**², nor their use and installation, which is described by Guide **C1193**.

1.4 For protective glazing systems that are designed to resist blast and other effects refer to Guide **C1564** in combination with this guide.

1.5 This guide is not applicable to the design of joints sealed with aerosol foam sealants.

1.6 For structural sealant glazing systems refer to Guide **C1401** in combination with this guide.

1.7 The values and calculations stated in SI units are to be regarded as the standard. The values given in parentheses and inch-pound units are provided for information only. SI units in this guide are in conformance with IEEE/ASTM SI 10-1997.

1.8 The Committee having jurisdiction for this guide is not aware of any comparable standards published by other organizations.

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 The boldface numbers in parentheses refer to the list of references at the end of this standard.

1.9 *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.*

2. Referenced Documents

2.1 ASTM Standards:³

C216 Specification for Facing Brick (Solid Masonry Units Made from Clay or Shale)

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

C920 Specification for Elastomeric Joint Sealants

C1193 Guide for Use of Joint Sealants

C1401 Guide for Structural Sealant Glazing

C1481 Guide for Use of Joint Sealants with Exterior Insulation and Finish Systems (EIFS)

C1518 Specification for Precured Elastomeric Silicone Joint Sealants

C1523 Test Method for Determining Modulus, Tear and Adhesion Properties of Precured Elastomeric Joint Sealants

C1564 Guide for Use of Silicone Sealants for Protective Glazing Systems

2.2 The tables included in this guide are based on the reference version (year) outlined below. The references may not represent the most recent version of these standards based on publication dates and update intervals of these external references. Updates to these standards may have been published at intervals inconsistent with updates to this standard. Evaluation of accurate properties and data for the materials and the locale of the project are recommended.

³ 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.