



Standard Guide for Structural Sealant Glazing¹

This standard is issued under the fixed designation C1401; 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 Structural sealant glazing, hereinafter referred to as SSG, is an application where a sealant not only can function as a barrier against the passage of air and water through a building envelope, but also primarily provides structural support and attachment of glazing or other components to a window, curtain wall, or other framing system.

1.2 This guide provides information useful to design professionals, manufacturers, contractors, and others for the design and installation of a SSG system. This information is applicable only to this glazing method when used for a building wall that is not more than 15° from vertical; however, limited information is included concerning a sloped SSG application.

1.3 Only a silicone chemically curing sealant specifically formulated, tested, and marketed for structural sealant glazing is acceptable for a SSG system application.

1.4 The committee with jurisdiction for this standard is not aware of any comparable standard published by other organizations.

1.5 The calculations and values stated in SI units are to be regarded as the standard. Values in parenthesis and inch-pound units are for information only. SI units in this guide are in conformance with IEEE/ASTM SI 10.

1.6 *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:²

B117 Practice for Operating Salt Spray (Fog) Apparatus

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.

C99 Test Method for Modulus of Rupture of Dimension Stone
C119 Terminology Relating to Dimension Stone
C162 Terminology of Glass and Glass Products
C503 Specification for Marble Dimension Stone
C509 Specification for Elastomeric Cellular Preformed Gasket and Sealing Material
C510 Test Method for Staining and Color Change of Single- or Multicomponent Joint Sealants
C568 Specification for Limestone Dimension Stone
C615 Specification for Granite Dimension Stone
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
C864 Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers
C880 Test Method for Flexural Strength of Dimension Stone
C920 Specification for Elastomeric Joint Sealants
C1036 Specification for Flat Glass
C1048 Specification for Heat-Strengthened and Fully Tempered Flat Glass
C1087 Test Method for Determining Compatibility of Liquid-Applied Sealants with Accessories Used in Structural Glazing Systems
C1115 Specification for Dense Elastomeric Silicone Rubber Gaskets and Accessories
C1135 Test Method for Determining Tensile Adhesion Properties of Structural Sealants
C1172 Specification for Laminated Architectural Flat Glass
C1184 Specification for Structural Silicone Sealants
C1193 Guide for Use of Joint Sealants
C1201 Test Method for Structural Performance of Exterior Dimension Stone Cladding Systems by Uniform Static Air Pressure Difference
C1248 Test Method for Staining of Porous Substrate by Joint Sealants
C1249 Guide for Secondary Seal for Sealed Insulating Glass Units for Structural Sealant Glazing Applications
C1253 Test Method for Determining the Outgassing Potential of Sealant Backing