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Standard Specification for Precured Elastomeric Silicone Joint Sealants[1]

This standard is issued under the fixed designation C1518; 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 Precured elastomeric silicone joint sealants, hereinafter referred to as seal, are manufactured in flat, cured, extruded shapes and are primarily used to span joint openings in construction. This specification describes the properties of applied, flat shaped precured elastomeric silicone joint sealants, hereinafter referred to as applied seal, that bridge joint openings and are adhered to joint substrates utilizing a liquid applied silicone adhesive sealant, specified by the manufacturer, hereinafter referred to as adhesive to construction substrates, to seal building openings such as panel joints, metal flashing joints, or other building openings in place of conventional liquid applied sealants.

1.2 Seals are applied in three different configurations:

1.2.1 As a bridge joint, the seal is applied flat on the surface to cover a joint opening. See Fig. 1.

1.2.2 As a beveled bridge joint, the seal is applied on the beveled edge of a substrate to bridge a joint opening. See Fig. 2.

1.2.3 As a U-joint, the seal is applied in a U-configuration within a joint. See Fig. 3.

1.3 This specification is for a flat extruded shape. A three-dimensional shape used at a joint cross section or termination is being considered for future inclusion in the specification.

1.4 An applied seal meeting the requirements of this specification shall be designated by the manufacturer as to movement class and tear class as described in Section 5.

1.5 The values stated in SI units are to be regarded as the standard. The values given in brackets are for information only.

2. Referenced Documents

2.1 *ASTM Standards:*[2]

C717 Terminology of Building Seals and Sealants

C1442 Practice for Conducting Tests on Sealants Using Artificial Weathering Apparatus

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

D1566 Terminology Relating to Rubber

G113 Terminology Relating to Natural and Artificial Weathering Tests of Nonmetallic Materials

3. Terminology

3.1 *Definitions:*

3.1.1 Refer to Terminology C717 for definitions of terms used in this standard, including but not limited to the following: cohesive failure, adhesive failure, elastomeric, elongation, joint, modulus, primer, seal, sealant, shelf-life, substrate.

3.1.2 Refer to Terminology G113 for definitions related to artificial weathering.

3.1.3 Refer to Terminology D1566 for tear.

4. Significance and Use

4.1 This specification describes several classifications of applied seals as described in Section 5. The purchaser or design professional shall recognize that not all materials meeting this specification are suitable for all applications and substrates. It is essential, therefore, that the proper classification of the seal system is provided for the intended use. The test methods in this specification relate to elastomeric performance, adhesion of the adhesive to the seal and adhesion of the adhesive to the substrate, only as adhesion relates to the test specimens. The standard substrate for qualification to this specification is portland cement mortar. The standard joint configuration for qualification to this specification is the bridge joint configuration as shown in Fig. 1. Users are advised to have adhesion tests performed in the field on the actual substrate to determine adhesion performance.

NOTE 1—Other joint configurations such as beveled bridge joint application and/or U-joint application in place or in addition to the standard joint configuration may be specified for the test with the applied seal sample.

NOTE 2—Other substrates such as EIFS, brick, wood, aluminum, plastic, metal or other in place or in addition to the standard substrate may be specified for the test with the applied seal sample.

5. Classification

5.1 *Movement Class*—A seal qualifying under this specification shall be classified for movement capability as follows.

[1] This specification 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.