



Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid- Applied Sealants¹

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1. Scope

1.1 This specification covers the basic requirements for cylindrical sealant backing to be used with cold liquid applied sealants for use in building seals.

1.2 Cylindrical sealant backing serves one or more of the following functions:

1.2.1 Limits the amount and depth of sealant applied into a joint,

1.2.2 Acts as a bond breaker to allow joint movement without undue stress to the sealant,

1.2.3 Provides a form to assist the sealant in developing the proper shape factor, and

1.2.4 Acts as a barrier to the flow of sealant through the joint.

1.3 The committee with jurisdiction over this standard is not aware of any comparable standards published by other ASTM committees or other organizations.

1.4 *This specification may involve hazardous materials, operations, and equipment. 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:

C 717 Terminology of Building Seals and Sealants²

C 1016 Test Method for Determination of Water Absorption of Sealant Backing (Joint Filler) Material²

C 1087 Test Method for Determining Compatibility of Liquid-Applied Sealants with Accessories Used in Structural Glazing Systems²

C 1253 Test Method for Determining the Outgassing Potential of Sealant Backing²

D 1622 Test Method for Apparent Density of Rigid Cellular Plastics³

D 1623 Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics³

D 5249 Specification for Backer Material for Use with Cold- and Hot-Applied Joint Sealants in Portland-Cement Concrete and Asphalt Joints⁴

3. Terminology

3.1 *Definitions*—The definitions for the following terms used in this standard are found in Terminology C 717:

3.1.1 bi-cellular sealant backing, bond breaker, closed cell, joint, open cell, outgassing, seal, sealant, sealant backing, skin.

4. Classification

4.1 Cylindrical sealant backings are divided into three types.

4.1.1 *Type C*—cylindrical flexible sealant backings composed predominately of closed cell material as defined in Terminology C 717.

4.1.2 *Type O*—cylindrical flexible sealant backings composed of predominantly open cell material as defined in Terminology C 717.

4.1.3 *Type B*—cylindrical flexible sealant backings composed of bi-cellular material as defined in Terminology C 717.

5. Significance and Use

5.1 This specification is designed to give some indication as to the differences in performance for various cylindrical sealant backings.

5.2 Although this specification qualifies a cylindrical sealant backing for use, it does not address the compatibility of the backing with the sealants with which it will make contact. Sealant compatibility should be confirmed by the sealant manufacturer. Compatibility characteristics of sealants in contact with cylindrical sealant backings can be determined by Test Method C 1087.

6. Test Methods

6.1 *Water Absorption*—Testing for water absorption shall be made in accordance with Test Method C 1016, Procedure B.

6.2 *Density*—Testing for density shall be made in accordance with Test Method D 1622.

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² *Annual Book of ASTM Standards*, Vol 04.07.

³ *Annual Book of ASTM Standards*, Vol 08.01.

⁴ *Annual Book of ASTM Standards*, Vol 04.03.

6.3 *Outgassing*—Testing for outgassing shall be made in accordance with Test Method C 1253.

6.4 *Compression Deflection and Recovery*—Testing to be made in accordance with Specification D 5249.

6.5 *Tensile Strength*—Testing for tensile strength to be made in accordance with Test Method D 1623. In all cases use a sample length sufficient to fit the tensile testing equipment.

6.6 Use of a $\frac{5}{8}$ in. diameter sample shall be standard.

7. Sampling

7.1 Samples used for testing shall be taken directly from the package as commercially supplied by the manufacturer.

8. Physical Properties

8.1 Physical properties of the cylindrical sealant backing material shall conform to the requirements of Table 1.

9. Workmanship, Finish, and Appearance

9.1 The product shall be clean, free of scale, foreign matter, oil, or water which could wipe off on a joint sidewall and interfere with the proper cure or adhesion of the sealant.

TABLE 1 Sealant Backer Properties

NOTE 1—This table applies to cylindrical sealant backing for use with cold liquid applied sealants.

Property	Test Method	Type C	Type B	Type O
Water absorption (g/cc)	C 1016 Procedure B	<0.03	0.03–0.10	>0.10
Density (kg/m ³)	D 1622	24–48	24–48	24–48
Outgassing (No. of bubbles)	C 1253	>1	<1	0
Compression recovery (%)	D 5249	>90	>90	>90
Compression deflection (kPa)	D 5249	>20.5	>20.5	<20.5
Tensile strength (kPa)	D 1623	>200	>200	>100

10. Packaging and Package Marking

10.1 Packaging shall be marked with the following information:

10.1.1 Name, brand, or trademark of the manufacturer,

10.1.2 Quantity and size,

10.1.3 ASTM designation (Type C, O, or B), and

10.1.4 Any other information that the manufacturer requires.

11. Keywords

11.1 backer rod; cylindrical sealant backing; joint backing; sealant backing

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