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Standard Specification for Solvent Release Sealants¹

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1. Scope

1.1 This specification describes the properties of a one-component solvent release sealant for use in building construction. These sealants are generally formulated to withstand a maximum joint movement of 7.5 % in extension and 7.5 % in compression of the nominal joint width.

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

1.3 The committee with jurisdiction of this specification is not aware of any similar specification within ISO or any other organization.

2. Referenced Documents

2.1 *ASTM Standards:*

¹ This specification is under the jurisdiction of ASTM Committee C24 on Building Seals and Sealants and is under the direct responsibility of Subcommittee C24.20 on General Sealant Standards.

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- C 661 Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer²
- C 712 Test Method for Bubbling of One-Part, Elastomeric, Solvent-Release Type Sealants²
- C 717 Terminology of Building Seals and Sealants²
- C 1193 Guide for Use of Joint Sealants²
- C 1216 Test Method for Adhesion and Cohesion of One-Part Elastomeric Solvent Release Sealants²
- C 1257 Test Method for Accelerated Weathering of Solvent-Release-Type Sealants²
- D 2202 Test Method for Slump of Sealants²
- D 2203 Test Method for Staining from Sealants²
- D 2377 Test Method for Tack-Free Time of Caulking Compounds and Sealants²
- D 2452 Test Method for Extrudability of Oil- and Resin-Base Caulking Compounds²

3. Terminology

3.1 *Definitions*—Definitions of the following terms used in this specification are found in Terminology C 717: adhesive failure (adhesion loss), caulk (*v*), compound, durometer, hardness, joint, primer, seal, sealant, sealing material, and solvent release sealant.

4. Materials and Manufacture

4.1 The sealing compound shall be a solvent release material compounded to conform to the requirements prescribed in this specification.

4.2 All material and workmanship shall be in accordance with good commercial practice. The producer is permitted a wide latitude in choice of raw materials for making these products. Consequently, there is no implication that the compounds are equivalent in all physical properties.

4.3 The manufacturing process shall be such as will ensure a homogeneous mix, free of defects that would affect serviceability, and of a consistency suitable for immediate application.

5. General Requirements

5.1 *Standard Conditions*—Perform all of the tests in a laboratory controlled at $23 \pm 2^\circ\text{C}$ ($73 \pm 3.6^\circ\text{F}$) and $50 \pm 10\%$ relative humidity. Condition sealant samples for at least 5 h at these conditions before any tests are performed.

5.2 The sealant in the original container shall be suitable for use for at least 12 months from the date of manufacture when stored at a temperature neither below 5°C (41.0°F) nor exceeding 27°C (80.6°F).

5.3 The color of the sealant shall be as agreed upon between the purchaser and the manufacturer.

5.4 The sealant shall be intended for use only on clean, dry surfaces. When a primer is recommended by a manufacturer for a specific substrate, all tests on that substrate shall include the primer. The proper use of primers (or surface conditioners) with the application of sealants is described in detail in Guide C 1193. This guide also describes proper methods for joint design, backup materials, surface preparation, tooling of sealant, and other important procedures in sealant application in buildings.

6. Significance and Use

6.1 This specification describes solvent release sealants for general caulking and sealing operations in building construction. However, it should be recognized by the user that not all sealants meeting this specification are suitable for all applications and all substrates and that there is no implication that the sealants are equivalent in all physical properties.

6.2 Refer to Guide C 1193 for information on the proper use of sealants meeting this specification.

7. Physical Requirements

7.1 The sealant shall conform to the physical requirements specified in Table 1.

8. Test Methods

8.1 *Indentation Hardness*—Refer to Test Method C 661.

8.2 *Bubbling*—Refer to Test Method C 712.

8.3 *Adhesion and Cohesion After Cyclic Movement*—Refer to Test Method C 1216.

8.4 *Accelerated Weathering*—Refer to Test Method C 1257.

8.5 *Slump*—Refer to Test Method D 2202.

8.6 *Staining*—Refer to Test Method D 2203.

8.7 *Tack-Free Time*—Refer to Test Method D 2377.

8.8 *Extrudability After Aging*—Refer to Test Method D 2452.

9. Packaging and Package Marking

9.1 Unless otherwise specified in the contract or order, the sealant shall be packaged in standard commercial containers constructed so as to ensure acceptance by common or other carrier for safe transportation to the point of delivery.

² Annual Book of ASTM Standards, Vol 04.07.

TABLE 1 Physical Requirements

Property	Requirement	Test Method
Extrudability	9/s/mL, max	D 2452
Shore A hardness	50, max	C 661
Bubbling	25 %, max	C 712
Adhesive and cohesive loss	9 cm ² (1.5 in. ²), max per substrate	C 1216
Slump	0.38 cm (0.15 in.), max	D 2202
Stain index	3, max	D 2203
Tack-free time	72 h, max	D 2377
Accelerated weathering		C 1257
Edge cracking	3, max	
Center cracking	3, max	
Adhesion loss	3, max	
Color Change	as agreed	

9.2 Shipping containers shall be marked with the name, grade, and quantity of the sealant contained therein, as defined by the contract or order under which shipments are made. The name of the supplier and the lot or batch shall also be shown.

10. Keywords

10.1 accelerated weathering; application life; bubbling; extrusion rate; sealant; sealing compound (sealing material); slump; solvent-release sealant; staining; tack free

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