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Standard Guide for Paintability of Latex Sealants[1]

This standard is issued under the fixed designation C1520; 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 describes the practical considerations that may be used to determine the compatibility of a paint or coating to be applied over a latex sealant or caulk. It evaluates the appearance and not the performance characteristics of the coated or painted joint.

1.2 The committee with jurisdiction over this standard is not aware of any comparable standards published by other organizations.

1.3 *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 requirements prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

C717 Terminology of Building Seals and Sealants

D1729 Practice for Visual Appraisal of Colors and Color Differences of Diffusely-Illuminated Opaque Materials

D2244 Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates

E284 Terminology of Appearance

3. Terminology

3.1 *Definitions*—Refer to Terminology C717 for definitions of the following term(s) used in this guide: compatibility, cure, joint, latex sealant. Refer to Terminology E284 for definitions of the following term(s) used in this guide: gloss.

3.2 *color change*—a change in either the observed (see Practice D1729) or measured color (see Test Method D2244) of a substance.

3.3 *cracking*—a failure resulting in a discontinuous film (of paint) or bead (of sealant).

4. Summary of Practice

4.1 This guide reviews many of the issues concerning the compatibility of latex sealants with paint. While the focus of this guide is on latex sealants, the paint or coating may be of any composition.

5. Significance and Use

5.1 The intent of this guide is to provide the reader with information concerning possible reasons for paint failures where the paint is used over a latex sealant.

CONSIDERATIONS

6. Temperature

6.1 Since standard testing is usually performed at "room temperature," about 22°C, this would be considered the ideal temperature for application and curing. As the temperature deviates from this ideal, the "science" of drying changes in as much as lower temperature results in slower drying and faster drying occurs at elevated temperatures.

7. Percent Relative Humidity

7.1 In waterborne sealants, the humidity directly affects the ability of the system to lose water. Standard testing is typically done at 50 % RH, which allows for an acceptable evaporation rate. Temperature and humidity variations in climatic regions and fluctuations through the application and cure will have significant impacts.

8. Type of Paint

8.1 The type of paint applied to the sealant has an effect on how well it may handle dimensional changes, adhere to the sealant or dry during the curing of the sealant. Paints made from more flexible resins (low Tg) with low pigment volume content (PVC) (PVC << CPVC) will withstand the most change while a hard resin (high Tg) at high PVC will be the least forgiving. Broadly speaking, high gloss, interior paints represent the former while interior flat paints represent the latter.

[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.