



Standard Test Method for Predicting Effect of Weathering on Face Glazing and Bedding Compounds on Metal Sash¹

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1. Scope

1.1 This test method covers an accelerated procedure for predicting the effect of weathering on adhesion, surface cracking and peeling, deep bead cracking, oil exudation, and wrinkling of face glazing or bedding compounds, or both, intended for exterior use on steel, aluminum, or other metal sash.

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

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

1.4 *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

D 1730 Practices for Preparation of Aluminum and Aluminum-Alloy Surfaces for Painting³

G 151 Practice for Exposing Nonmetallic Materials in Accelerated Test Devices That Use Laboratory Light Sources⁴

G 153 Practice for Operating Enclosed Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials⁴

3. Terminology

3.1 *Definitions*—Refer to Terminology C 717 for definitions of the following terms: adhesive failure (loss of adhesion); bead; bedding; compound; face glazing; glazing; muntin; rabbet; sight line.

¹ This test method is under the jurisdiction of ASTM Committee C24 on Building Seals and Sealants and is the direct responsibility of Subcommittee C24.12 on Oil and Resin Base Glazing and Caulking Compounds.

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

³ *Annual Book of ASTM Standards*, Vol 02.05.

⁴ *Annual Book of ASTM Standards*, Vol 14.02.

4. Summary of Test Method

4.1 The test compound is pressed with a knife into a special aluminum muntin bar/glass assembly which simulates both face glazing and bedding applications. Each test compound is run in duplicate. The compound is then exposed in an accelerated weathering unit for a period up to 300 h. Loss of adhesion, wrinkling, surface cracking and peeling, deep bead cracking, and oil exudation are observed and recorded.

5. Significance and Use

5.1 The effect of accelerated weathering will assist in judging the quality and predicting the performance of glazing compounds. Accelerated weathering devices should not, however, be used to predict the exact number of years of service life, or the exact type of failure which will occur under all the varied conditions encountered in actual use.

6. Apparatus and Materials

6.1 *Accelerated Weathering Unit*—As described in Practices G 151 and G 153, equipped with water spray and an un-insulated black panel thermometer. The instrument must also be capable of being programmed for a repeating cycle of 102 minutes light followed by 18 minutes of light plus water spray.

6.2 *Aluminum Muntin Bar/Glass Assembly Parts*, two sets, as illustrated in Fig. 1. It may be necessary to machine muntin bars to the desired dimensions.

6.3 *Putty Knife*.

7. Sampling

7.1 Thoroughly mix the entire contents of a full, previously unopened container on a clean, nonabsorptive surface, and take from this the compound to be tested.

8. Conditioning

8.1 Condition the full unopened container, the muntin bar, glass, and spacers for at least 5 h at $73.4 \pm 3.6^\circ\text{F}$ ($23 \pm 2^\circ\text{C}$).

9. Procedure

9.1 Solvent clean the entire assembly thoroughly as described under Type A of Practices D 1730.

9.2 *Back Bedding*—Force a bead of the conditioned compound into the narrow rectangular channel formed by the glass