



Designation: C 741 – 93 (Reapproved 1998)

Standard Test Method for Accelerated Aging of Wood Sash Face Glazing Compound¹

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1. Scope

1.1 This test method covers the testing of wood sash face glazing compounds for accelerated aging.

NOTE 1—Test Method D 2249 describes a similar procedure for a different type of glazing compound.

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 *This standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of whoever uses this standard to consult and 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 822 Practice for Conducting Tests on Paint and Related Coatings and Materials Using Filtered Open-Flame Carbon-Arc Exposure Apparatus³

D 2249 Test Method for Predicting the Effect of Weathering on Face Glazing and Bedding Compounds on Metal Sash²

2.2 *Federal Specifications:*

TT-P-96A Paint, Latex-base, For Exterior Wood and Metal Surfaces (White and Tints)⁴

2.3 *NWMA Industry Standards:*

NWMA I.S. 4-81 Water Repellant Preservative Treatment for Millwork⁵

NWMA M-2-81 Swellometer Test⁵

3. Terminology

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

4. Summary of Test Method

4.1 A section of wood muntin bar and glass, simulating a typical wood sash, is glazed with the compound and exposed in the accelerated weathering unit for 200 h, then visually inspected for degradation or failure.

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 that will occur under all the varied conditions encountered in actual use.

6. Apparatus

6.1 *Accelerated Weathering Unit*, described in Practice D 822.

6.2 *Wood Muntin Bar*, three, 9-in. (225-mm) sections, Standard Wood Sash Muntin Bar.

6.3 *Glass*, three pieces, double-strength Grade B, 9 by 1 in. (225 by 25 mm).

6.4 *Rubber Base Bedding Compound*.

6.5 *Wood Preservative*, one gallon, commercial type (water repellant), conforming to NWMA I.S. 4-81.

6.6 *Paint*, 2 fl oz (59 cm³), white latex exterior, conforming to Federal Specification TT-P-96A.

6.7 *Glazier's Points*.

6.8 *Putty Knife*.

6.9 *Rule*, calibrated to 1/32 in. (or 1 mm).

7. Sampling

7.1 Take the compound to be tested directly from a container as commercially supplied by the manufacturer. If there are any signs of separation, mix the compound thoroughly prior to testing.

8. Procedure

8.1 Immerse the wood muntin bars in the wood preservative for 30 s when using a solvent-borne preservative and 3 min for water-borne preservative in accordance with NWMA M-2-81. Weight them if necessary to ensure complete submersion. Then remove them from the preservative and dry for 24 h at 73.4 ± 3.6°F (23 ± 2°C) and 50 ± 5 % relative humidity.

8.2 Paint the bars on all surfaces with one coat of white latex exterior paint, and allow to dry for 24 h at 73.4 ± 3.6°F

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

³ *Annual Book of ASTM Standards*, Vol 06.01.

⁴ Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.

⁵ Available from National Woodwork Manufacturer's Association, 205 West Touhy Avenue, Park Ridge, IL 60068.

($23 \pm 2^{\circ}\text{C}$) and 50 % relative humidity.

8.3 Prepare three test assemblies as follows:

8.3.1 Using the putty knife, apply a thin layer of the rubber-base bedding compound over the entire length of the narrower (3.16 in. or 80 mm) width of the glazing rabbet. Place one long edge of the glass face on the bedding compound, so that the length of bar and glass coincide, and fasten in place with two glazier's points (or equivalent), each located 3 in. (75 mm) from the bar end. Allow the assembly to cure for 24 h at $73.4 \pm 3.6^{\circ}\text{F}$ ($23 \pm 2^{\circ}\text{C}$) and 50 ± 5 % relative humidity.

8.3.2 Using two cut-off strokes and four smoothing strokes, apply freshly worked compound over the entire length of the glass to form a triangular glazing bead as in standard face glazing practice, making sure the compound is level with the sightline. Close the end of the assembly to prevent slippage. Allow the assembly to cure 3 h at $73.4 \pm 3.6^{\circ}\text{F}$ and 50 ± 5 % relative humidity.

8.4 Mount the three assemblies vertically in the weatherometer with the glazing beads facing the arc, and expose for a period of 200 h.

8.5 Remove the assemblies from the weatherometer and carefully examine the compound for evidence of cracking, wrinkling, bleeding, loss of adhesion, change of color, or slump.

9. Report

9.1 Report the following:

9.1.1 Full description what evidence, if any, is observed, on any or all of the assemblies of:

9.1.1.1 Cracking,

9.1.1.2 Wrinkling,

9.1.1.3 Bleeding,

9.1.1.4 Loss of adhesion,

9.1.1.5 Change in color, and

9.1.1.6 Slump (state amount, measured to nearest $\frac{1}{32}$ in. (or 1 mm)).

10. Precision and Bias

10.1 There is no precision or bias statement for this test method. The rating system in Test Method D 2249 can be used for rating and reporting in Section 9.

11. Keywords

11.1 accelerated aging; face glazing; weathering

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