



Designation: D5722 – 08

# Standard Practice for Performing Accelerated Outdoor Weathering of Factory- Coated Embossed Hardboard Using Concentrated Natural Sunlight and a Soak-Freeze-Thaw Procedure<sup>1</sup>

This standard is issued under the fixed designation D5722; 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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

## 1. Scope\*

1.1 This practice covers techniques to accelerate weathering effects of factory-coated embossed hardboard using Cycle 1 of Practice G90 (concentrated natural sunlight with periodic surface water spray) plus a soak-freeze thaw cycle (see Section 5 of this practice).

1.2 Testing by use of the methods described in this practice may be employed in the qualitative assessment of weathering effects. The relative durability of coated hardboards may be best determined by comparison of their test results with those of control specimens derived from real time exposure test experience.

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

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:<sup>2</sup>

- D660 Test Method for Evaluating Degree of Checking of Exterior Paints
- D661 Test Method for Evaluating Degree of Cracking of Exterior Paints
- D662 Test Method for Evaluating Degree of Erosion of Exterior Paints
- D772 Test Method for Evaluating Degree of Flaking (Scal-

- ing) of Exterior Paints
- D4214 Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films
- G90 Practice for Performing Accelerated Outdoor Weathering of Nonmetallic Materials Using Concentrated Natural Sunlight
- G113 Terminology Relating to Natural and Artificial Weathering Tests of Nonmetallic Materials
- G169 Guide for Application of Basic Statistical Methods to Weathering Tests

## 3. Terminology

3.1 The terminology used in this practice is defined in Terminology G113.

### 3.2 Definitions:

3.2.1 *hardboard, n*—generic term for a panel manufactured primarily from inter-felted lignocellulosic fibers (usually wood), consolidated under heat and pressure in a hot press to a density of 0.50 g/cm<sup>3</sup> (31 lb/ft<sup>3</sup>) or greater and to which other materials may have been added during manufacture to improve certain properties.

3.2.2 *embossed hardboard, n*—hardboard that is manufactured with a textured surface.

3.2.2.1 *Discussion*—Wood-like and stucco patterns are examples of typical embossed hardboard surfaces.

## 4. Summary of Practice

4.1 This practice is used to accelerate long-term weathering effects by subjecting the samples to concentrated natural sunlight (with periodic daytime surface water spray) plus a soak-freeze-thaw cycle.

4.2 This practice has been useful in accelerating finish failure involving loss of film integrity, such as cracking, peeling, and flaking of factory-coated embossed hardboard.

## 5. Significance and Use

5.1 The ability to quickly and accurately evaluate and predict long-term weathering performance of factory-applied coatings is of paramount importance in making sound business and technical decisions.

<sup>1</sup> This practice is under the jurisdiction of ASTM Committee D01 on Paint and Related Coatings, Materials, and Applications and is the direct responsibility of Subcommittee D01.27 on Accelerated Testing.

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<sup>2</sup> 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.

\*A Summary of Changes section appears at the end of this standard