



Designation: ~~D3891-96(Reapproved2002)^{ε1}~~ Designation: D 3891 – 08

Standard Practice for Preparation of Glass Panels for Testing Paint, Varnish, Lacquer, and Related Products¹

This standard is issued under the fixed designation D 3891; 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.

~~^{ε1}Note—Keywords were added editorially in July 2002.~~

1. Scope

1.1 This practice covers the preparation of glass panels for subsequent testing of paint, varnish, lacquer, and related products.²

1.2

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 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: D364~~ *Specification for Industrial Grade Xylene*³

D 1152 *Specification for Methanol (Methyl Alcohol)*

D 1193 *Specification for Reagent Water*

3. Significance and Use

3.1 The procedures described in this practice are designed to provide uniform glass panels for testing of paint, varnish, lacquer, conversion coatings and related products.

4. Reagents and Materials

4.1 *Purity of Water*—Unless otherwise indicated, references to water shall be understood to mean reagent water conforming to Type IV of Specification D 1193.

4.2 *Solvents*—Varnish Makers' and Painters (VM&P) naphtha, xylene, 2-methoxypropanol, and methanol complying with the appropriate specifications (see ~~Specifications D364 and~~ *Specification D 1152*).

4.3 Glass of the following types may be specified in the applicable test methods:

4.3.1 *Window Glass*, (float glass) the surface of which is plain and free of irregularities.

NOTE 1—Float glass is the most common kind of glass used for windows. It is produced by floating a ribbon of red hot glass on a bath of molten tin. The sides of the float glass exposed to tin and to air have somewhat different characteristics. The tin side contains tin diffused into the glass structure. Paint generally releases more easily from the tin side, but it may be contaminated with tin, which could affect chemical analysis. Paint generally adheres better to the air side. The sides can be distinguished by exposing the glass to a UV-A light ("black light"): the air side will appear clear, and the tin side will appear frosted. Depending on the application, the user may want to choose which side is appropriate for that test, and make sure that the same side is coated on every panel. Note however, that if the window glass used is *not* float glass (for example, plate glass), both sides of the glass will be the same.

4.3.2 *Clear Plate Glass*, not less than 5 mm thick.

4.3.3 *Plate Glass* that has been ground uniformly on one side with 1F carborundum.

4.3.4 *Black Structural Glass*, one side of which has been polished to a smooth, high-gloss surface.

4.3.5 *White Structural Glass*, one side of which has been polished to a smooth, high gloss.

¹ 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.

Current edition approved May 10, 1996. Published July 1996. Originally published as D3891-80. Last previous edition D3891-90.

Current edition approved Nov. 1, 2008. Published December 2008. Originally approved in 1980. Last previous edition approved in 2002 as D 3891 – 96 (2002)^{ε1}.

² This practice is intended to be equivalent to Method 2021 of U.S. Federal Test Method Standard 141.

³ Discontinued, see 1982

⁴ 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.