

Standard Test Method for Relative Rigidity of Poly(Vinyl Chloride)(PVC) Siding¹

This standard is issued under the fixed designation D6777; 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 procedure describes a method to determine a numerical value indicating the relative rigidity or stiffness of vinyl siding panels. This procedure is not intended for routine quality control inspection during the manufacture of vinyl siding. The rigidity of vinyl siding is believed to be controlled primarily by its configuration and is not believed to be significantly influenced by manufacturing variables.

1.2 Vinyl siding with higher rigidity is often easier to handle and install than siding of lower rigidity. It is expected to provide a straighter appearance when installed on walls having an uneven surface.

1.3 All other vinyl siding requirements and test methods can be identified through Specification [D3679](#).

1.4 There is no known ISO equivalent to this standard.

1.5 *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:²

D618 Practice for Conditioning Plastics for Testing

D883 Terminology Relating to Plastics

D1600 Terminology for Abbreviated Terms Relating to Plastics

D3679 Specification for Rigid Poly(Vinyl Chloride) (PVC) Siding

D5947 Test Methods for Physical Dimensions of Solid Plastics Specimens

¹ This test method is under the jurisdiction of ASTM Committee D20 on Plastics and is the direct responsibility of Subcommittee D20.24 on Plastic Building Products.

Current edition approved May 1, 2016. Published May 2016. Originally approved in 2002. Last previous edition approved in 2010 as D6777 - 02(2010) ^{ϵ 1}. DOI:10.1520/D6777-16.

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.

3. Terminology

3.1 *Definitions*—Definitions are in accordance with Terminology [D883](#) and [D1600](#) unless otherwise indicated.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *relative rigidity (of PVC siding)*—stiffness of a piece of vinyl siding.

3.2.2 *rigidity index (of PVC siding)*—amount of sample sag or deflection relative to sample length. The “rigidity index” is defined as 100 minus the deflection value, divided by the sample length, expressed as a percentage.

4. Summary of Test Method

4.1 In this procedure the test specimen is a piece of vinyl siding 100 in. long. This specimen is placed on top of a level table with 50 in. of the specimen extending unsupported past the edge of the table, allowing the specimen to sag under its own weight. The amount of sag that occurs is used to calculate a rigidity index for the sample.

5. Significance and Use

5.1 Vinyl siding with higher rigidity is often easier to install than siding with lower rigidity and expected to provide a straighter appearance when installed on walls having an uneven surface.

5.2 The rigidity of vinyl siding is believed to be controlled primarily its characteristic configuration and is not believed to be significantly influenced by manufacturing variables. Siding weight has little influence on this test.

6. Interferences

6.1 The supporting table and floor must be flat and level. Calibrations of flatness, parallelism, and levelness, as described in [9.2-9.4](#) shall be performed before running this test.

7. Apparatus

7.1 This procedure requires a table that is flat and level. The table must be at least 50 in. long and at least as wide as the widest test specimen to be measured. The height of the table is not critical. The edge of the table over which the specimen will extend shall not have a radius more than 0.125 in. The table must be positioned on a hard surface or floor (no carpet) that is also flat and level over a length extending at least 50 in. from the edge of the table.

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