



Designation: D 711 – 89 (Reapproved 1998)

## Standard Test Method for No-Pick-Up Time of Traffic Paint<sup>1</sup>

This standard is issued under the fixed designation D 711; 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 approval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

### 1. Scope

1.1 This test method covers a laboratory test for determining the no-pick-up time of a traffic paint by a rubber wheel.

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 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:*

D 2000 Classification System for Rubber Products in Automotive Applications<sup>2</sup>

### 3. Significance and Use

3.1 This test method serves as a control test and should be used only as such. There is no direct correlation between the results of this test and field applications.

### 4. Apparatus

4.1 The apparatus<sup>3</sup> as shown in Fig. 1 shall consist of a steel cylinder of the shape and dimensions as indicated, fitted with two replaceable O-rings and a ramp of shape and dimensions as shown.

4.2 The detailed dimensional requirements of the steel cylinder are given in Fig. 1. The total weight of the assembly complete with O-rings shall be 11 lb 14 oz  $\pm$  1 oz (5386  $\pm$  28 g).

4.3 The detailed dimensional requirements of the ramp are shown in Fig. 1.

4.4 The replaceable O-rings shall be made of synthetic rubber or rubber-like material meeting the requirements of HK 715 of Specification D 2000.

4.5 The dimensional requirements of the O-ring are as follows:

Outside diameter	4 $\frac{1}{8}$ in. (104 mm)
Inside diameter	3 $\frac{3}{8}$ in. (85 mm)
Cross section	$\frac{3}{8}$ in. (9.5 mm)

### 5. Procedure

5.1 Prepare a test stripe at least 3 in. (75 mm) in width of the paint to be tested by a mechanical spreader, or other suitable means on a clean plate glass panel at a wet film thickness of 15  $\pm$  0.5 mils. (Use a plate glass panel approximately 4 by 8 by  $\frac{1}{8}$  in. (100 by 200 by 3 mm).)

5.1.1 Record the time of application. Allow the panel to dry in a horizontal position under the laboratory conditions specified (73.5  $\pm$  3.5°F (23  $\pm$  2°C) and 50  $\pm$  5 % relative humidity).

5.1.2 Test the paints used with drop-in beads without beads unless otherwise specified or agreed upon between the purchaser and the seller.

5.2 Butt the glass plate against the ramp. At regular intervals remove the wheel from its rest, hold against the rest as a starting point, then free roll the weighted wheel down the inclined ramp and over the paint film with each roll of the wheel over a new wheel path. Position the wheel properly so that a clean surface of the wheel will come into contact with the paint film. As many as three passes of the wheel can be made before the wheel needs to be cleaned. This can be done with a rag saturated with acetone. It is best to set aside the wheel after washing until all the solvent has evaporated.

5.3 Note the end point for no-pick-up time when no paint adheres to the rubber rings of the test wheel when it is rolled over the paint film. As the end point is approached, roll the weighted wheel over the paint film every 30 s.

### 6. Report

6.1 Report the time elapsed between application of the paint and the end point as the drying time for no-pick-up of the traffic paint.

### 7. Precision and Bias

7.1 *Precision*—Because of the poor precision of this test method, if it is used in a specification, the maximum deviation from the maximum no-pick-up time specified should be agreed upon between the purchaser and the seller.

7.2 *Bias*—Bias cannot be determined.

<sup>1</sup> This test method is under the jurisdiction of ASTM Committee D-1 on Paint and Related Coatings, Materials, and Applications and is the direct responsibility of Subcommittee D01.44 on Traffic Coatings.

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<sup>2</sup> *Annual Book of ASTM Standards*, Vol 09.02.

<sup>3</sup> An apparatus meeting the requirements is available from Paul N. Gardner Co., Station 9, P.O. Box 6633, Fort Lauderdale, FL 33316.