



Designation: D 1163 – 53 (Reapproved 1968)

Standard Test Method for LINT OF PAPER TOWELS¹

This Standard is issued under the fixed designation D 1163; 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.

1. Scope

1.1 This method covers the determination of the amount of lint removed from paper towels by the defined procedure.

2. Apparatus

2.1 The apparatus, illustrated schematically in Fig. 1, shall conform to the requirements as to the materials and dimensions shown therein.

3. Test Specimens

3.1 The test specimens shall be rectangular sheets of paper towels, $4\frac{1}{4}$ to 5 by $8\frac{1}{4}$ to 9 in. (108 to 127 by 210 to 228 mm) in dimensions.

3.2 The test specimens shall be taken from samples obtained in accordance with ASTM Method D 585, Sampling and Accepting a Single Lot of Paper, Paperboard, Fiberboard, or Related Product² and shall be conditioned in accordance with ASTM Method D 685, Conditioning Paper and Paper Products for Testing.²

4. Procedure

4.1 Make the test in an atmosphere conditioned in accordance with Method D 685.

NOTE 1—The abrading operations should be conducted in still air so that lint is not carried away by constant or transient air currents.

4.2 Be sure that the entire apparatus is clean and dry.

4.3 Place two specimens, edges coinciding, evenly on the screen under the bottom rubber of the rubber assembly, with an approximately even specimen margin $\frac{1}{4}$ to 1 in. (6.4 to 25.4 mm) wide around the edge of the rubber. Paper specimens only, never rubber, should be in contact with the screen. It is seldom necessary to fasten the paper specimen

in place, but if the specimen does show any tendency to slip out of alignment under the rubber, it may be held in place by common pins through the specimen margin into the side of the rubber.

4.4 Turn the crank five full turns, at the rate of one turn per 0.9 to 1.1 s. This moves the weighted rubber and specimen back and forth across the screen.

4.5 Remove the specimen and present a fresh paper surface to the screen (either the other side of the first specimen or a fresh specimen). Repeat the procedure in 4.4.

4.6 Repeat the procedure in 4.4 and 4.5 until a total of 32 paper surfaces have been subjected to the prescribed rubbing against the screen.

4.7 Upon completion of the test (32 surfaces treated) remove the entire apparatus from the glass plate, collect any lint deposited on the glass plate by spatula and camel-hair brush, then weigh the collected lint to the nearest 0.1 mg.

NOTE 2—Extreme care must be exercised in the collection of lint so that none is missed or lost.

4.8 Make as many lint determinations (32 surfaces) as the pertinent specifications for the material or the purchase order requires.

5. Report

5.1 The report shall include the following:

- 5.1.1 Number of complete (32 surfaces) tests made,
- 5.1.2 Weight of lint from each test, and
- 5.1.3 Average of the lint weights.

¹ This method is under the jurisdiction of ASTM Committee D-6 on Paper and Paper Products.

Current edition accepted Sept. 15, 1953. Originally issued 1951. Replaces D 1163 – 51 T.

² *Annual Book of ASTM Standards*, Part 20.