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AMERICAN SOCIETY FOR TESTING AND MATERIALS
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Standard Test Method for LEVELING CHARACTERISTICS OF PAINTS BY DRAW-DOWN METHOD[1]

This standard is issued under the fixed designation D 2801; 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.

[ε1] NOTE—Editorial changes were made throughout in August 1981.

1. Scope

1.1 This method[2,3] covers the laboratory determination of the relative leveling characteristics of liquid water-reducible or solvent-reducible coatings in white and light tints.

1.2 It is not applicable to unpigmented products, textured finishes, or dark colors. It should not be used to compare coatings with widely differing viscosity or thixotropic characteristics as these variations will tend to reduce precision.

2. Summary of Method

2.1 The coating to be tested is applied to a smooth-surfaced, hiding-power chart, by means of a special leveling test blade designed to lay down the coating in parallel pairs of stripes of varying film thickness. The completed draw-down is allowed to dry in a horizontal position and the number of parallel stripes that have completely and partially flowed together are recorded.

3. Significance

3.1 Evaluations of coating leveling by this method have been shown to correlate with evaluations by brushout. Since more consistent results are obtained by the controlled application method it is preferred to the brushout method.

3.2 Since other factors may influence the tendency to sag, this test method is not intended to measure that property.

4. Description of Terms

4.1 The relative leveling of a coating is a measure of the ability of that coating to flow out after application and obliterate any surface irregularities such as brush marks, orange peel, or peaks and craters that have been produced by the process of applying the coating.

5. Apparatus

5.1 *Leveling Test Blade*[4] (Fig. 1)—An applicator blade designed to lay down the coating to be tested in parallel pairs of stripes of varying film thicknesses.

5.2 *Draw-Down Guide*—A smooth-surfaced straightedge against which the shoulder of the applicator blade may be pressed while making the draw-down.

5.3 *Test-Surface*[5]—A smooth-surfaced paper chart having adjacent black and white areas and coated with a suitable varnish or lacquer so as to render the surface impervious to paint liquids.

6. Preparation of Sample

6.1 Thoroughly mix the material under test

[1] This method is under the jurisdiction of ASTM Committee D-1 on Paint and Related Coatings and Materials.
Effective Oct. 3, 1969.

[2] This method is essentially that developed by the New York Society for Paint Technology and adopted by the Federation of Societies for Paint Technology. The section on Precision was added by ASTM and is based upon the data of the New York Society for Paint Technology.

[3] See "The Evaluation of Leveling by Draw-Down Method," *Official Digest*, New York Society for Paint Technology, Technical Committee No. 44, Vol 32, No. 430, p. 1435.

[4] New York Society for Paint Technology Leveling Test Blade; available from Precision Gage and Tool Co., Dayton, Ohio.

[5] Available from Morest Co., New York, N.Y., or the Leneta Co., Ho-ho-kus, N.J., "The Evaluation of Leveling by Draw-Down Method," *Official Digest*, New York Society for Paint Technology Technical Committee No. 44, Vol 32, No. 430, p. 1435.