Designation: D5324 – 10

# Standard Guide for Testing Water-Borne Architectural Coatings[1]

**TABLE 1 List of Standards in Sectional Order**

Clear and Pigmented Organic Finishes
D1475 Test Method For Density of Liquid Coatings, Inks, and Related Products
D1554 Terminology Relating to Wood-Base Fiber and Particle Panel Materials
D1640 Test Methods for Drying, Curing, or Film Formation of Organic Coatings
D1729 Practice for Visuaingth3.20Appraissuain-472.10[ofn-472.10Cinorsofn-472.100(andn-472.10Cinoron)]TJETQqBT/F31.00Tf/GS

Evaluation of Architectural Coatings

D5150 Test Method for Hiding Power of Architectural Paints Applied by Roller

D5179 Test Method for Measuring Adhesion of Organic Coatings to Plastic Substrates by Direct Tensile Testing

D5326 Test Method for Color Development in Tinted Latex Paints

D5895 Test Methods for Evaluating Drying or Curing During Film Formation of Organic Coatings Using Mechanical Recorders

D6037 Test Methods for Dry Abrasion Mar Resistance of High Gloss Coatings

D6583 Test Method for Porosity of Paint Film by Mineral Oil Absorption

D6686 Test Method for Evaluation of Tannin Stain Resistance of Coatings

D6736 Test Method for Burnish Resistance of Latex Paints

D6900 Test Method for Wet Adhesion of Latex Paints to a Gloss Alkyd Enamel Substrate

D7072

requirements. The significance of the tests and the normal range of values are presented in the different sections, in most cases.

5.3 This guide does not indicate relative importance of the various tests nor does it recommend specific test values because properties very important to one purchaser may be less so to another.

## 6. Sampling

6.1 Prior to sampling, the condition of the container should be established, since damage to it may cause evaporation, skinning, or other undesirable effects on the coating.

6.2 Sample in accordance with Practice D3925

also be required if a product specification is involved. Color measuring instruments provide numerical values that can be compared to subsequent measurements. The referenced method covers the calculation of instrumental determinations

Method D2370 is a much more discriminating method.[6] Determine flexibility in accordance with Test Methods D522 or elongation with Test Method D2370.

10.1.5 *Resistance to Household Chemicals—*

ability of a coating system to block stains from a variety of inks or other household staining materials in accordance with Test Method

coating. It is useful, however, for determining the similarity of two batches. The referenced method covers the determination of the volatile content by weight of solvent- and water-reducible coatings. The quantity determined subtracted from 100 % gives the nonvolatile content of the coating. Determine the volatile content in accordance with Test Method D2369.

11.3 *Volatile Organic Compound (VOC) Content*—Several local jurisdictions have adopted air pollution controls that severely limit the amount of VOC permitted in architectural coatings, including interior latex gloss and semigloss paints. Since these paints may contain solvent such as coalescent and co-solvent wet-edge aids, it is essential that these products not exceed the established VOC limits. Determine VOC content in accordance with Practice D3960.

11.4 *Water Content*—The amount of water may be required in the calculation of the VOC of coatings. The referenced methods cover the determination of the total water content of water-borne coatings, one using gas-liquid chromatography and the other the Karl Fischer reaction. Determine water content in accordance with Test Methods D3792 or D4017.

11.5 *Pigment Content*—Pigment provides the hiding and color and influences many other properties of a coating. The