Designation: D564 – 87 (Reapproved 2014)

Standard Test Methods for Liquid Paint Driers[1]

This standard is issued under the fixed designation D564; 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.

This standard has been approved for use by agencies of the U.S. Department of Defense.

1. Scope

1.1 These test methods cover the test procedures to be applied to liquid paint driers used in paints and related coatings. Typical paint driers, listed in Specification D600, are carboxylates of lead, cobalt, manganese, zinc, iron, calcium, and zirconium.

1.2 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

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:*[2]

D234 Specification for Raw Linseed Oil (Withdrawn 2007)[3]

D235 Specification for Mineral Spirits (Petroleum Spirits) (Hydrocarbon Dry Cleaning Solvent)

D600 Specification for Liquid Paint Driers

D1544 Test Method for Color of Transparent Liquids (Gardner Color Scale)

D1640 Test Methods for Drying, Curing, or Film Formation of Organic Coatings at Room Temperature

D1644 Test Methods for Nonvolatile Content of Varnishes

D2090 Test Method for Clarity and Cleanness of Paint and Ink Liquids (Withdrawn 2007)[3]

D2373 Test Method for Determination of Cobalt in Paint Driers by EDTA Method

D2374 Test Method for Lead in Paint Driers by EDTA Method

D2375 Test Method for Manganese in Paint Driers by EDTA Method

D2613 Test Method for Calcium or Zinc in Paint Driers by EDTA Method

D3804 Test Method for Iron in Paint Driers by EDTA Method

D3924 Specification for Environment for Conditioning and Testing Paint, Varnish, Lacquer, and Related Materials

D3969 Test Method for Zirconium in Paint Driers by EDTA Method

D3970 Test Method for Cerium in Paint Driers by Oxidimetric Determination

D3980 Practice for Interlaboratory Testing of Paint and Related Materials (Withdrawn 1998)[3]

D3988 Test Method for Vanadium in Paint Driers by EDTA Method

D3989 Test Method for Total Rare Earth Metals in Paint Driers by EDTA Method

3. Significance and Use

3.1 Driers accelerate the drying of oil, paint, printing ink, and varnish.

3.2 These test methods are applicable to liquid driers manufactured for use in paints and related coatings.

3.3 The tests for metallic content using ethylenediaminetetraacetic acid dihydrate (EDTA) are intended for concentrated solutions of single metals; two or more metals may cause interference.

4. Physical Tests

4.1 *Sampling*—Sample in accordance with Practice D3980.

4.2 *Conditioning*—Follow Specification D3924 except where other temperatures are specified.

4.3 *Appearance*—After conditioning overnight at room temperature (see Specification D3924) examine the drier without aid of magnification for clarity and cleanness and for presence of foreign matter, sediment, skins, turbidity or haziness, in accordance with Test Method D2090.

[1] These test methods are under the jurisdiction of ASTM Committee D01 on Paint and Related Coatings, Materials, and Applications and are the direct responsibility of Subcommittee D01.21 on Chemical Analysis of Paints and Paint Materials.

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[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] The last approved version of this historical standard is referenced on www.astm.org.