



Standard Specification for Artists' Oil, Resin-Oil, and Alkyd Paints¹

This standard is issued under the fixed designation D 4302; 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.

1. Scope

1.1 This specification establishes requirements for composition, physical properties, performance, and labeling of artists' oil, resin-oil, and alkyd paints.

1.2 This specification covers pigments, vehicles, and additives. Requirements are included for pigment identification, lightfastness, consistency, and drying time.

1.3 Table 1 lists some pigments meeting the lightfastness requirements in this specification. In order to identify other pigments that meet these requirements, instructions are given for test specimen preparation. Test methods for determining relative lightfastness are referenced.

1.4 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

1.5 This pertains only to the test method found in Section 8. *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 79 Specification for Zinc Oxide Pigments²
- D 185 Test Methods for Coarse Particles in Pigments, Pastes, and Paints²
- D 387 Test Method for Color and Strength of Color Pigments with a Mechanical Muller³
- D 476 Specification for Titanium Dioxide Pigments²
- D 602 Specification for Barium Sulfate Pigments²
- D 1133 Test Method for Kauri-Butanol Value of Hydrocarbon Solvents⁴
- D 1210 Test Method for Fineness of Dispersion of Pigment-Vehicle Systems by Hegman-Type Gage³
- D 1640 Test Methods for Drying, Curing, or Film Formation of Organic Coatings at Room Temperature³

¹ This specification is under the jurisdiction of ASTM Committee D-1 on Paint and Related Coatings, Materials, and Applications and is the direct responsibility of Subcommittee D01.57 on Artist Paints and Related Materials.

Current edition approved May 10, 1999. Published July 1999. Originally published as D 4302 – 83. Last previous edition D 4302 – 98a.

² Annual Book of ASTM Standards, Vol 06.03.

³ Annual Book of ASTM Standards, Vol 06.01.

⁴ Annual Book of ASTM Standards, Vol 06.04.

D 1729 Practice for Visual Evaluation of Color Differences of Opaque Materials³

D 2244 Test Method for Calculation of Color Differences from Instrumentally Measured Color Coordinates³

D 2245 Test Method for Identification of Oils and Oil Acids in Solvent-Reducible Paints³

D 2369 Test Method for Volatile Content of Coatings³

D 2689 Practices for Testing Alkyd Resins²

D 4236 Practice for Labeling Art Materials for Chronic Health Hazards⁵

D 4303 Test Methods for Lightfastness of Pigments Used in Artists' Paints⁵

D 4838 Test Method for Determining the Relative Tinting Strength of Chromatic Paints⁵

D 4941 Practice for Preparing Drawdowns of Artists' Paste Paints⁵

E 284 Terminology of Appearance³

3. Terminology

3.1 Definitions:

3.1.1 *Colour Index Name*—consists of the category (type of dye or pigment), general hue, and an assigned number given to a colorant in the Colour Index⁶ as an international identification system.

3.1.1.1 *Discussion*—For example, the Colour Index Name of one phthalocyanine blue pigment is Pigment Blue 15 (PB 15).

3.1.2 *Colour Index Number*—a five-digit number given in the Colour Index that describes the chemical constitution of a colorant.

3.1.2.1 *Discussion*—For example, the Colour Index Number of one phthalocyanine blue pigment is 74160.

3.1.3 Refer to Terminology E 284 for appearance terms used in this specification.

3.2 Definitions of Terms Specific to This Standard:

3.2.1 *alkali refined oil*—triglyceride oil of vegetable origin that has been treated with alkali to reduce the free acidity by formation of water-soluble salts, subsequently removed by washing.

3.2.1.1 *Discussion*—An appreciable degree of free acidity may cause a greater development of yellowing in a dried film

⁵ Annual Book of ASTM Standards, Vol 06.02.

⁶ Colour Index, 3rd ed., 5 Vols and Revisions, The Society of Dyers and Colourists, London, 1971–75. Available from the American Association of Textile Chemists and Colorists, P. O. Box 12215, Research Triangle Park, NC 27709.

