



Designation: D 211 – 67 (Reapproved 2002)

Standard Specification for Chrome Yellow and Chrome Orange Pigments¹

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1. Scope

1.1 This specification covers six types of commercially pure lead chromate pigments as follows:

- Type I—Primrose Chrome Yellow,
- Type II—Lemon Chrome Yellow,
- Type III—Medium Chrome Yellow,
- Type IV—Light Chrome Orange,
- Type V—Dark Chrome Orange, and
- Type VI—Chrome Yellow for Green.

1.2 The following hazard caveat applies to the test method portion of this specification only. *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 126 Test Methods for Analysis of Yellow, Orange, and Green Pigments Containing Lead Chromate and Chromium Oxide Green²
- D 185 Test Methods for Coarse Particles in Pigments, Pastes, and Paints²
- D 235 Specification for Mineral Spirits (Petroleum Spirits) (Hydrocarbon Dry Cleaning Solvents)³
- D 387 Test Method for Color and Strength of Chromatic Pigments with a Mechanical Muller⁴
- D 523 Test Method for Specular Gloss⁴
- D 562 Test Method for Consistency of Paints Measuring Krebs Units (KU) Viscosity Using a Stormer-Type Viscometer⁴
- D 600 Specification for Liquid Paint Driers³

¹ This specification is under the jurisdiction of ASTM Committee D01 on Paint and Related Coatings, Materials, and Applications and is the direct responsibility of Subcommittee D01.31 on Pigment Specifications.

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² *Annual Book of ASTM Standards*, Vol 06.03.

³ *Annual Book of ASTM Standards*, Vol 06.04.

⁴ *Annual Book of ASTM Standards*, Vol 06.01.

D 822 Practice for Filtered Open-Flame Carbon-Arc Exposures of Paint and Related Coatings⁴

D 1210 Test Method for Fineness of Dispersion of Pigment-Vehicle Systems by Hegman-Type Gage⁴

E 97 Test Method for Directional Reflectance Factor, 45-deg 0-deg, of Opaque Specimens for Broad-Band Filter Reflectometry⁵

2.2 *Federal Specification:*

TT-R-266 Resin, Alkyd; Solutions⁶

3. Composition and Properties

3.1 The pigments shall be chemical precipitates consisting of normal or basic lead chromates, or mixtures of these, with or without admixtures of other insoluble compounds of lead or other materials used in manufacture to control certain properties. The pigments shall conform to the requirements for composition as prescribed in Table 1.

3.2 The mass color and character of the tint formed by mixture with a white pigment shall be the same as, and the strength shall be within mutually agreed upon limits of a standard acceptable to both the purchaser and the seller.

3.3 When mutually agreed upon between the purchaser and the seller as being essential to the end use of the pigment, resistance to loss of gloss, chalking, and color change shall be tested as specified in 5.1.4. The exposed panel shall show no chalking, a loss of not more than 30 % of the original gloss, and a color change no greater than the lightness difference. ΔL , shown for each pigment type in Table 2.

4. Sampling

4.1 Two samples shall be taken at random from different packages from each lot, batch, day's pack, or other unit of production in a shipment. When no markings distinguishing between units of production appear, samples shall be taken from different packages in the ratio of two samples for each 10 000 lb (4450 kg), except that for shipments of less than 10 000 lb two samples shall be taken. At the option of the purchaser, the samples may be tested separately, or samples

⁵ Discontinued; see 1992 *Annual Book of ASTM Standards*, Vol 06.01.

⁶ Available from Standardization Documents Order Desk, DODSSP, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5098