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Standard Specification for Chrome Oxide Green Pigment¹

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

1. Scope

1.1 This specification covers the dry pigment commercially known as chrome oxide green.

1.2 The values stated in SI units are to be regarded as the standard. The values given in parentheses are for information only.

1.3 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*²

D126 Test Methods for Analysis of Yellow, Orange, and Green Pigments Containing Lead Chromate and Chromium Oxide Green

D185 Test Methods for Coarse Particles in Pigments

D280 Test Methods for Hygroscopic Moisture (and Other Matter Volatile Under the Test Conditions) in Pigments

3. Composition and Properties

3.1 The pigment shall consist of practically pure chromium sesqui-oxide (Cr_2O_3) without any admixture, and shall conform to the following requirements:

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 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.

Total chromium (calculated as Cr_2O_3), min, %	98
Total matter soluble in water, max, %	0.5
Moisture and other volatile matter, max, %	0.5
Coarse particles (total residue retained on a No. 325 (45 μm) sieve), max, %	1.0
Organic colors or lakes	none

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

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 4545 kg (10 000 lb) 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 after blending in equal quantities the samples from the same production unit to form a composite sample.

5. Test Methods

5.1 Tests shall be conducted in accordance with the following methods where applicable. Test procedures not covered by ASTM test methods shall be mutually agreed upon between the purchaser and the seller.

5.2 *Chromium Content*—Test Methods **D126**.

5.3 *Total Matter Soluble in Water*—Test Methods **D126**.

5.4 *Moisture Content*—Test Method **D280**.

5.5 *Coarse Particles*—Test Methods **D185**.

5.6 *Organic Colors and Lakes*—Test Methods **D126**.

6. Keywords

6.1 chrome oxide green; chromium sesqui-oxide; pigment; tint; tinting strength; white pigment

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