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Standard Specification for Zinc Hydroxy Phosphite Pigment[1]

This standard is issued under the fixed designation D4462; 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 covers a zinc hydroxy phosphite pigment having the general formula $ZnHPO_3 \cdot [ZnO \cdot 2Zn(OH)_2]$.

1.2 *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]

D185 Test Methods for Coarse Particles in Pigments

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

D281 Test Method for Oil Absorption of Pigments by Spatula Rub-out

D4450 Test Method for Analysis of Zinc Hydroxy Phosphite Pigment

3. Composition and Properties

3.1 The pigment shall consist of zinc hydroxy phosphite and shall conform to the requirements in Table 1.

3.2 The mass color of the dry pigment is white. The shade and tinting strength, when specified, shall be within mutually agreed upon limits of a reference sample acceptable by the purchaser and the seller as tested in an agreed test procedure.

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 (4545 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 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 ASTM test methods. Test procedures not covered by ASTM test methods shall be mutually agreed upon between the purchaser and the seller.

5.2 *Chemical Analysis*—Test Method D4450.

5.3 *Moisture Loss*—Determine the hygroscopic moisture loss by Method A of Test Methods D280.

5.4 *Oil Absorption*—Test Method D281.

5.5 *Sieve Residue*—Determine the residue on a No. 325 sieve in accordance with the Procedure for Insoluble Dry Pigments of Test Methods D185.

6. Keywords

6.1 phosphorous acid; pigment; zinc; zinc hydroxy phosphite; zinc oxide

[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.