



Designation: ~~D185 – 07 (Reapproved 2012)~~ D185 – 07 (Reapproved 2019)

Standard Test Methods for Coarse Particles in Pigments¹

This standard is issued under the fixed designation D185; 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 determination of the amount of coarse particles in dry pigments.

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 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~~ safety, health, and ~~health~~ environmental practices and determine the applicability of regulatory limitations prior to use.*

1.4 *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

E11 Specification for Woven Wire Test Sieve Cloth and Test Sieves

3. Significance and Use

3.1 In production of paints, smoothness of the paint film is of paramount importance. Agglomerates or coarse particles larger than 45 μm are difficult to disperse and may prevent obtaining a smooth film. These test methods are a valuable quality control test for grading raw materials.

4. Apparatus

4.1 The apparatus shall consist of a 200-mm (8-in.) 45- μm (No. 325) sieve conforming to Specification **E11**. An 8-in. 45- μm sieve for comparison purposes should be retained in the laboratory as a reference standard. Whenever a new sieve is secured, a practical test of its accuracy should be made by running on it and on the reference standard sieve a comparison test, using a pigment that has a considerable amount of coarse particles. A reserve stock of such a pigment should be kept for this purpose.

5. Procedure for Insoluble Dry Pigments, Except Metallic Aluminum and Bronze Powders

5.1 Weigh approximately 100 g of a pigment specimen to the nearest 0.1 g on an analytical balance. Wet the sieve on both sides with water and transfer the pigment to the sieve.

5.2 Hold the sieve under a tap delivering about 300 to 500 mL of the wash liquid (water) per minute. Slightly shake the sieve and move the stream of water around on the pigment in the sieve to get the pigment to pass through the sieve. Use a soft camel-hair brush to help the pigment wet out and pass through the sieve. If the sieve is held at a slight angle so that the pigment gradually collects at one edge during the washing process, and then rotated, the pigment may be brushed out rapidly, with no risk of clogging the sieve. Continue the water rinsing and brushing until no more pigment is passing through the sieve. This can be checked by tilting the sieve and inspecting the water passing through for pigment.

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 **D01.31** 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.