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Standard Specification for Basic Carbonate White Lead Pigment[1]

This standard is issued under the fixed designation D 81; 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 the material commercially known as basic carbonate white lead, used as a pigment and in putty. The pigment may be purchased in the dry form or as a paste in oil.

2. Referenced Documents

2.1 *ASTM Standards:* [2]

D 185 Test Methods for Coarse Particles in Pigments, Pastes, and Paints

D 280 Test Methods for Hygroscopic Moisture (and Other Matter Volatile Under the Test Conditions) in Pigments

D 1208 Test Methods for Common Properties of Certain Pigments

D 1301 Test Methods for Chemical Analysis of White Lead Pigments

3. Composition and Properties

3.1 *Dry Pigment*—The pigment shall be free of adulterants and shall contain not more than traces of impurities incident to well-controlled manufacture of high-grade basic carbonate white lead. The pigment shall conform to the following requirements:

Lead carbonate, %	62 to 75
Moisture and other volatile matter, max, %	0.7
Total other impurities, max, %	1.0
Coarse particles (total residue retained on a No. 325 (45-μm) sieve), max, %	1.0

3.2 *Paste in Oil*—The paste shall be made by thoroughly grinding the specified pigment with linseed oil. The paste shall not be caked in the container and shall break up readily in oil to form a smooth paint of brushing consistency. The paste shall conform to the following requirements:

Pigment, min, %	89
Linseed oil, max, %	11
Moisture and other volatile matter, max, %	0.7
Coarse particles and skins (total residue retained on a No. 325 (45-μm) sieve), max, % of the dry pigment	1.5

3.3 *Semipaste Containing Volatile Thinner*—The semipaste shall be made by thoroughly grinding the specified pigment with a mixture of linseed oil and a small amount of volatile thinner. The semipaste shall not be caked in the container and shall be readily stirred to a uniform mixture which shall mix readily with oil, turpentine, or volatile petroleum spirits to form a smooth paint of brushing consistency. The odor of the semipaste, as taken from the container, while drying or after drying, shall be not abnormally pungent or disagreeable. The semipaste shall conform to the following requirements:

Pigment, min, %	87.5
Linseed oil, max, %	10.5
Moisture and other volatile matter, %[A]	1.5 to 3.0
Moisture, max, %	0.7
Coarse particles and skins (total residue retained on a No. 325 (45-μm) sieve), max, % of the dry pigment	1.5

[A] The volatile matter shall be turpentine, volatile petroleum spirits, or any mixture thereof.

3.4 The color and color strength, when specified, 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 5 tons (inch-pound or SI), 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.

[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.