



Designation: ~~D81–87 (Reapproved 2008)~~^{ε1} D81 – 87 (Reapproved 2014)

Standard Specification for Basic Carbonate White Lead Pigment¹

This standard is issued under the fixed designation D81; 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.

^{ε1} NOTE—The units statement in subsection 1.2 was corrected editorially in July 2008.

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.

1.2 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

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](#)

[D1208 Test Methods for Common Properties of Certain Pigments](#)

[D1301 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 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- μ m) 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- μ m) 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:

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.