Designation: D 605 – 82 (Reapproved 2003)

Standard Specification for Magnesium Silicate Pigment (Talc)[1]

This standard is issued under the fixed designation D 605; 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 Department of Defense.

1. Scope

1.1 This specification covers pigments that consist substantially of natural hydrous magnesium silicate, and is restricted to those minerals that conform to the chemical limits prescribed herein and can be suitably processed to what is commercially known as paint pigment quality.

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 The following hazard caveat applies to the test method portion of this specification only. *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 and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*

D 280 Test Methods for Hygroscopic Moisture (and Other Matter Volatile Under the Test Conditions) in Pigments[2]

D 281 Test Method for Oil Absorption of Pigments by Spatula Rub-out[3]

D 562 Test Method for Consistency of Paints Measuring Krebs Unit (KU) Viscosity Using a Stormer-Type Viscometer[3]

D 717 Test Methods for Analysis of Magnesium Silicate Pigment[2]

D 1208 Test Methods for Common Properties of Certain Pigments[2]

D 1210 Test Method for Fineness of Dispersion of Pigment-Vehicle Systems by Hegman-Type Gage[3]

3. Composition and Properties

3.1 The pigment shall be made by grinding or otherwise processing natural, hydrous magnesium silicate and shall conform to the following requirements:

	Weight %	
	min	max
Combined magnesium and calcium silicates (MgO plus SiO_2 plus CaO)	88	...
Calcium oxide (CaO)	...	10
Aluminum and iron oxides (R_2O_3)	...	6
Loss on ignition	...	7
Moisture and other volatile material	...	1

3.2 *Color*—The color shall be equal, within agreed upon tolerances, to that of a reference sample agreed upon between the purchaser and the seller.

3.3 *Coarse Particles*—The pigment shall contain no more than 2 % of coarse particles, retained on a 45-µm (No. 325) sieve except as may be agreed upon between the purchaser and the seller.

3.4 *Water-Soluble Matter*—The pigment shall contain no more than 1 % water-soluble matter except as may be agreed upon between the purchaser and the seller.

3.5 *Oil Absorption*—The oil absorption shall be equal, within agreed upon tolerances, to that of a reference sample agreed upon between the purchaser and the seller.

3.6 *Consistency*—When consistency is included in the purchaser's specification, it shall be equal, within agreed upon tolerances, to that of a reference sample agreed upon between the purchaser and the seller.

3.7 *Fineness*—The paint fineness shall be equal, within agreed upon tolerances, to that of a reference sample agreed upon between 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 5000 kg (10 000 lb), except that for shipments of less than 10 000 lb, two samples shall be taken. At the option of the

[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] *Annual Book of ASTM Standards*, Vol 06.03.

[3] *Annual Book of ASTM Standards*, Vol 06.01.