



Standard Specification for Agricultural Liming Materials¹

This standard is issued under the fixed designation C 602; 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 agricultural liming materials, such as burnt lime (quicklime), hydrated lime, limestone, (calcitic and dolomitic), marl, shells, and byproducts including slag, and other materials.

1.2 The following precautionary caveat pertains only to the test method portion, Section 8: *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:

C 25 Test Methods for Chemical Analysis of Limestone, Quicklime, and Hydrated Lime²

C 125 Terminology Relating to Concrete and Concrete Aggregates³

D 3176 Practice for Ultimate Analysis of Coal and Coke⁴

E 11 Specification for Wire-Cloth and Sieves for Testing Purposes⁵

3. Terminology

3.1 Definitions:

3.1.1 *agricultural liming material*—a product whose calcium and magnesium compounds are capable of neutralizing soil acidity.

3.1.2 *air-cooled blast-furnace slag and granulated blast-furnace slag*—air-cooled blast-furnace slag and granulated blast furnace slag as defined in Terminology C 125.

3.1.3 *calcium carbonate equivalent (C.C.E.)*—the acid-neutralizing capacity (of an agricultural liming material) of the material expressed as weight percent of calcium carbonate.

4. Chemical Classifications

4.1 Agricultural liming materials shall be classified in terms

of calcium carbonate equivalent (C.C.E.), as shown in Table 1.

NOTE 1—Marl and some byproduct liming materials are used for neutralizing soil acidity, but due to their varying composition, their chemical limits are not included. In some economic circumstances limestone, slag, and shells of less than 80 % C.C.E. may be used.

5. Sieve Analysis Classifications for Agricultural Limestone

5.1 Agricultural limestone shall be classified according to the minimum percentages passing the No. 8 (2.36-mm) and No. 60 (250-μm) sieves conforming to Specification E 11, as shown in Table 2.

NOTE 2—These classifications apply where the agricultural limestone is obtained by the normal crushing procedure and the product contains the fines of fracture. In some economic circumstances, coarser products are used. The No. 60 (250-μm) sieve was selected because research has shown that this sieve gives a more accurate representation of the particle size distribution of most agricultural limestones presently produced than a finer or coarser sieve. The No. 8 (2.36-mm) sieve is used to control the upper limit on the amount of coarse limestone particles that may be in the product.

6. Sieve Analysis Classifications for Agricultural Slag

6.1 *Air-Cooled Blast-Furnace Slag*—Air-cooled blast-furnace slag shall be classified the same as agricultural limestone as shown in Section 5.

6.2 *Granulated Blast-Furnace Slag*—Granulated blast-furnace slag shall be classified in accordance with the minimum percentages passing the No. 8 (2.36-mm) and the No. 60 (250-μm) sieves.

7. Particle Size Requirements for Hydrated Lime and Burnt Lime

7.1 Hydrated lime and burnt lime for agricultural use shall be classified in accordance with the minimum percentages passing the No. 8 (2.36-mm) and No. 60 (250-μm) sieves, as follows:

Passing Sieve No.	Min. %	
	Hydrated Lime	Burnt Lime
8 (2.36 mm)	100	95
60 (250 μm)	97	35

8. Sampling

8.1 Agricultural liming materials shall be sampled using the following equipment and procedures:

¹ This specification is under the jurisdiction of ASTM Committee C07 on Lime, and is the direct responsibility of Subcommittee C07.03 on Industrial Uses.

Current edition approved Nov. 10, 1995. Published February 1996. Originally published as C 602 – 67 T. Last previous edition C 602 – 95.

² *Annual Book of ASTM Standards*, Vol 04.01.

³ *Annual Book of ASTM Standards*, Vol 04.02.

⁴ *Annual Book of ASTM Standards*, Vol 05.05.

⁵ *Annual Book of ASTM Standards*, Vol 14.02.