Designation: C737 – 13

Standard Specification for Limestone for Dusting of Coal Mines[1]

This standard is issued under the fixed designation C737; 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 limestone suitable for use as dust in coal mines to reduce risk of coal dust explosions.

NOTE 1—Limestone can serve as a source of incombustible material in coal mine operations. Limestone is dusted onto coal exposures in sufficient amount so that not less than 65 % of all loose dust shall be limestone incombustible material. In return air courses the concentration of incombustible materials should be not less than 80 % of the total dust (MSHA 30 CFR 75.403). With such a concentration of limestone incombustible material, dust explosions cannot initiate or be propagated from nearby gas explosions. The limestone must be substantially dry in order to dust satisfactorily.

1.2 *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.*

1.3 The values stated in inch-pound units are to be regarded as standard. No other units of measurement are included in this standard.

2. Referenced Documents

2.1 *ASTM Standards:*[2]

C25 Test Methods for Chemical Analysis of Limestone, Quicklime, and Hydrated Lime

C50 Practice for Sampling, Sample Preparation, Packaging, and Marking of Lime and Limestone Products

C110 Test Methods for Physical Testing of Quicklime, Hydrated Lime, and Limestone

C1271 Test Method for X-ray Spectrometric Analysis of Lime and Limestone

C1301 Test Method for Major and Trace Elements in Limestone and Lime by Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP) and Atomic Absorption (AA)

3. Chemical Composition

3.1 Limestone shall conform to the following as to chemical composition:

Moisture (at point of manufacture), max, %	0.5
Silica, free and combined, max, %	4.0

4. Physical Properties

4.1 Limestone for this application shall have the following particle size:

Passing 850 µm (No. 20) sieve, min, %	100
Passing 75 µm (No. 200) sieve, min, %	70

5. Test Methods

5.1 *Chemical Analysis*—The chemical analysis of the limestone shall be conducted in accordance with Test Methods C25, C1271, or C1301.

5.2 *Particle Size*—The sieve analysis of limestone shall be conducted in accordance with Test Methods C110.

6. General Requirements

6.1 Either high calcium or dolomitic limestone may be furnished for this application.

7. Sampling, Inspection, etc.

7.1 The sampling, inspection, rejection, retesting, packaging, and marking shall be conducted in accordance with Methods C50.

8. Keywords

8.1 coal mines; dolomitic limestone; high calcium limestone; limestone; limestone dust; mine explosions; moisture content; silica content

[1] This specification is under the jurisdiction of ASTM Committee C07 on Lime and is the direct responsibility of Subcommittee C07.02 on Specifications and Guidelines.

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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.

***A Summary of Changes section appears at the end of this standard**

SUMMARY OF CHANGES

Committee C07 has identified the location of selected changes to this specification since the last issue, C737 – 08, that may impact the use of this specification. (Approved Dec. 1, 2013)

(1) Revised 1.1.
(2) Added Test Methods C1271 and C1301 to Section 2 and 5.1.
(3) Revised 4.1.