



Standard Specification for Extended Life Mortar for Unit Masonry¹

This standard is issued under the fixed designation C 1142; 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 extended life mortar as delivered for use in construction of non-reinforced or reinforced unit masonry.

1.2 This specification is a property standard.

1.3 Four types of mortar are covered: RM, RS, RN, and RO. These types of mortar can be manufactured by using one of the four mortar formulations with masonry aggregate: portland cement, portland cement-lime, masonry cement, or masonry cement with portland cements. The materials are listed in Section 5.

1.4 Appendix X1 provides a rationale statement and commentary.

2. Referenced Documents

2.1 ASTM Standards:

C 91 Specification for Masonry Cement²

C 144 Specification for Aggregate for Masonry Mortar³

C 150 Specification for Portland Cement²

C 207 Specification for Hydrated Lime for Masonry Purposes²

C 270 Specification for Mortar for Unit Masonry³

C 780 Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry³

C 1072 Test Method for Measurement of Masonry Flexural Bond Strength³

E 447 Test Methods for Compressive Strength of Masonry Prisms³

E 518 Test Methods for Flexural Bond Strength of Masonry³

2.2 Other Document:

National Institute of Standards and Technology, Handbook 44, *Specifications, Tolerances, and Other Technical Requirements for Commercial Weighing and Measuring Devices*⁴

3. Terminology

3.1 Definitions of Terms Specific to This Standard:

3.1.1 All terms in this specification have their conventional meaning, except as follows:

3.1.2 *extended life mortars*—mortar consisting of cementitious materials, aggregate, water and set-control admixtures which are measured and mixed at a central location, using weight-or-volume-control equipment. This mortar, as delivered to a construction site, shall be usable for a period in excess of 2½ h.

4. Ordering Information

4.1 The purchaser shall specify the following:

4.1.1 The mortar type in Table 1,

4.1.2 Length of workability time for the mortar, and

4.1.3 Desired consistency satisfactory for the mason's use when tested by the manufacturer in accordance with 10.2.

4.2 At the request of the purchaser, the producer shall, prior to delivery, furnish laboratory and field performance data satisfactory to the purchaser that the materials to be used will produce mortar of the type specified.

NOTE 1—The purchase order or contract may list the mortar ingredients desired and may state a list of optional data, which are in addition to the performance requirements in Section 7. Examples of such tests are: Test Method C 1072, Test Methods E 518, Test Methods E 447, and test data for mortar that has been retempered.

5. Materials

5.1 Materials used as ingredients in extended life mortar shall conform to the requirements specified in 5.1.1 through 5.1.4.2.

5.1.1 *Cementitious Materials*—Cementitious materials shall conform to the following ASTM specifications.

5.1.1.1 *Portland Cement*—Types I, II or III of Specification C 150.

5.1.1.2 *Masonry Cement*—Types M, S, or N of Specification C 91.

5.1.1.3 *Hydrated Lime*—Specification C 207, Type S.

NOTE 2—Type N limes may be permitted if shown by test or performance record to be not detrimental by the autoclave expansion.

5.1.2 *Aggregates*—The aggregate shall comply with Specification C 144.

5.1.3 *Water*—Water shall be clean and free of oils, acids, alkalis, salts, organic materials or other substances that may

¹ This specification is under the jurisdiction of ASTM Committee C12 on Mortars and Grouts for Unit Masonry and is the direct responsibility of Subcommittee C12.03 on Specifications for Mortars.

Current edition approved July 15, 1995. Published September 1995. Originally published as C 1142 – 90. Last previous edition C 1142 – 94.

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

³ *Annual Book of ASTM Standards*, Vol 04.05.

⁴ Available from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.