



Standard Specification for Air-Entraining Admixtures for Concrete¹

This standard is issued under the fixed designation C 260; 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 reappraisal. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reappraisal.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope

1.1 This specification covers materials proposed for use as air-entraining admixtures to be added to concrete mixtures in the field.

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 text of this specification references notes and footnotes which provide explanatory material. These notes and footnotes (excluding those in tables and figures) shall not be considered as requirements of the standard.

2. Referenced Documents

2.1 ASTM Standards:

C 183 Practice for Sampling and the Amount of Testing of Hydraulic Cement²

C 185 Test Method for Air Content of Hydraulic Cement Mortar²

C 233 Test Method for Air-Entraining Admixtures for Concrete³

3. Terminology

3.1 Definitions of Terms Specific to This Standard:

3.1.1 *air-entraining admixture, n*—for the purpose of this specification, a material that is used as an ingredient of concrete, added to the batch immediately before or during its mixing, for the purpose of entraining air.

4. General Requirements

4.1 At the request of the purchaser, the manufacturer shall state in writing that the air-entraining admixture supplied for use in the work is essentially identical in concentration, composition, and performance to the air-entraining admixture tested under this specification.

NOTE 1—It is recommended that, whenever practicable, tests with the air-entraining admixture be made using all of the ingredients of the

concrete proposed for the specific work, because the effect produced by the air-entraining admixture may vary with the properties of the other ingredients of the concrete.

4.2 Requirements for establishing compositional or chemical equivalence of a subsequent lot relative to a previous lot that was subjected to quality tests and found to comply with the requirements of 5.1 shall be determined if agreed upon by the purchaser and the manufacturer. At the request of the purchaser, the manufacturer shall recommend appropriate test procedures, such as infrared spectrophotometry (I.R.), pH value and solids content, for establishing the equivalence of materials from different lots or different portions of the same lot.

NOTE 2—Ultraviolet light absorption (UV) of solutions and infrared spectroscopy of dried residues have been found to be valuable for these purposes. The specific procedures to be employed and the criteria to establish equivalence should be stipulated with due regard to the composition and properties of the sample.

4.3 At the request of the purchaser, the manufacturer shall state in writing the chloride content of the air-entraining admixture and whether or not chloride was added during its manufacture.

NOTE 3—Admixtures that contain chlorides may accelerate corrosion of embedded metals.

5. Optional Uniformity Requirements

5.1 A series of two or more samples from a manufacturing lot will be considered sufficiently uniform to be properly composited into a single sample for quality testing provided they do not differ more than the amounts indicated in 5.4.

5.2 A subsequent sample or composite sample shall be considered in compliance with these requirements, so long as they differ from the original sample, tested to the requirements of 6.1, by no more than the amounts listed in 5.4, and provided that any additional optional, appropriate tests, such as infrared spectroscopy and ultraviolet light absorption, referred to in 4.2, also meet pre-agreed requirements.

5.3 Determinations of uniformity shall be made in accordance with the procedures given in the sections “Check Tests for Uniformity” and “Procedure for Residue by Oven Drying” of Test Method C 233.

5.4 Allowable differences in results of uniformity determinations shall not exceed the following amounts:

¹ This specification is under the jurisdiction of ASTM Committee C09 on Concrete and Concrete Aggregates and is the direct responsibility of Subcommittee C09.23 on Chemical Admixtures.

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

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