



# Standard Specification for Processing Additions for Use in the Manufacture of Hydraulic Cements<sup>1</sup>

This standard is issued under the fixed designation C 465; 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 pertains to the criteria and tests to be used for determining whether a processing addition, when used in the recommended amount at the option of the cement producer in the manufacture of hydraulic cements, meets the requirements as prescribed by definition in Specifications C 150, C 1157, C 845, and C 595. The materials listed in the following former ASTM Specifications shall be considered as meeting the requirements of this specification:

- C 150 – 62, for Portland Cement<sup>2</sup>
- C 205 – 58 T, for Portland Blast-Furnace Slag Cement<sup>3</sup>
- C 340 – 58 T, for Portland Pozzolan Cement<sup>3</sup>
- C 358 – 58, for Slag Cement<sup>3</sup>

1.2 The following safety hazards caveat pertains only to the test methods described in this specification. *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 33 Specification for Concrete Aggregates<sup>4</sup>
- C 39 Test Method for Compressive Strength of Cylindrical Concrete Specimens<sup>4</sup>
- C 78 Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)<sup>4</sup>
- C 109/C 109M Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50-mm] Cube Specimens)<sup>5</sup>
- C 114 Test Methods for Chemical Analysis of Hydraulic Cement<sup>5</sup>
- C 115 Test Method for Fineness of Portland Cement by the Turbidimeter<sup>5</sup>
- C 138 Test Method for Unit Weight, Yield, and Air Content

(Gravimetric) of Concrete<sup>4</sup>

- C 143 Test Method for Slump of Hydraulic Cement Concrete<sup>4</sup>
- C 150 Specification for Portland Cement<sup>5</sup>
- C 151 Test Method for Autoclave Expansion of Portland Cement<sup>5</sup>
- C 173 Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method<sup>4</sup>
- C 185 Test Method for Air Content of Hydraulic Cement Mortar<sup>5</sup>
- C 187 Test Method for Normal Consistency of Hydraulic Cement<sup>5</sup>
- C 191 Test Method for Time of Setting of Hydraulic Cement by Vicat Needle<sup>5</sup>
- C 192 Practice for Making and Curing Concrete Test Specimens in the Laboratory<sup>4</sup>
- C 204 Test Method for Fineness of Hydraulic Cement by Air Permeability Apparatus<sup>5</sup>
- C 205 – 58T Specification for Portland Blast-Furnace Slag Cement<sup>3</sup>
- C 226 Specification for Air-Entraining Additions for Use in the Manufacture of Air-Entraining Portland Cement<sup>5</sup>
- C 231 Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method<sup>4</sup>
- C 293 Test Method for Flexural Strength of Concrete (Using Simple Beam with Center-Point Loading)<sup>4</sup>
- C 340 – 58T Specification for Portland Pozzolan Cement<sup>3</sup>
- C 358 – 58 Specification for Slag Cement<sup>3</sup>
- C 595 Specification for Blended Hydraulic Cements<sup>5</sup>
- C 596 Test Method for Drying Shrinkage of Mortar Containing Portland Cement<sup>5</sup>
- C 617 Practice for Capping Cylindrical Concrete Specimens<sup>4</sup>
- C 845 Specification for Expansive Hydraulic Cement<sup>5</sup>
- C 1157 Performance Specification for Blended Hydraulic Cement<sup>5</sup>
- D 891 Test Methods for Specific Gravity, Apparent, of Liquid Industrial Chemicals<sup>6</sup>
- E 203 Test Method for Water Using Karl Fischer Reagent<sup>6</sup>

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee C-1 on Cement and is the direct responsibility of Subcommittee C01.20 on Additions.

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<sup>2</sup> See 1961 Book of ASTM Standards, Part 4.

<sup>3</sup> Discontinued, see 1958 Book of ASTM Standards, Part 4.

<sup>4</sup> Annual Book of ASTM Standards, Vol 04.02.

<sup>5</sup> Annual Book of ASTM Standards, Vol 04.01.

## 3. Materials

### 3.1 Cements:

<sup>6</sup> Annual Book of ASTM Standards, Vol 15.05.