



Standard Specification for Packaged, Dry, Rapid-Hardening Cementitious Materials for Concrete Repairs¹

This standard is issued under the fixed designation C 928; 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 packaged, dry, cementitious mortar or concrete materials for rapid repairs to hardened hydraulic-cement concrete pavements and structures. Materials that contain organic compounds, such as bitumens, epoxy resins, and polyesters, as the principal binder are not included.

1.1.1 Packaged, dry, concrete material contains aggregate of which at least 5 % by mass of the total mixture is retained on a 9.5-mm (3/8-in.) sieve.

1.1.2 Packaged, dry, mortar material contains aggregate of which less than 5 % by mass of the total mixture is retained on a 9.5-mm (3/8-in.) sieve.

1.2 Aqueous solutions, aqueous emulsions or dispersions may be included as components of the packaged materials. The manufacturer may specify that these liquids are to replace some or all of the mixing water.

1.3 Aggregates must be included as a component of the packaged materials. The manufacturer may recommend job site addition of specific amounts and types of additional aggregates to his product for some uses. However, such reformulated products are not within the scope of this specification.

1.4 The values stated in SI units are to be regarded as standard. The inch-pound units given in parentheses are for information only. Values in SI units shall be obtained by measurement in SI units or by appropriate conversion of measurements made in other units, using the Rules for Conversion and Rounding given in IEEE/ASTM SI-10.

1.5 The following safety hazards caveat pertains to the test methods portion of 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:

¹ This specification is under the jurisdiction of ASTM Committee C09 on Concrete and Concrete Aggregates and is the direct responsibility of Subcommittee C09.43 on Packaged, Dry, Combined Concrete.

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C 39 Test Method for Compressive Strength of Cylindrical Concrete Specimens²

C 78 Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)²

C 109/C 109M Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or 50-mm Cube Specimens)³

C 143 Test Method for Slump of Hydraulic Cement Concrete²

C 157 Test Method for Length Change of Hardened Hydraulic-Cement Mortar and Concrete²

C 192/C 192M Practice for Making and Curing Concrete Test Specimens in the Laboratory²

C 403/C 403M Test Method for Time of Setting of Concrete Mixtures by Penetration Resistant²

C 494 Specification for Chemical Admixtures for Concrete²

C 666 Test Method for Resistance of Concrete to Rapid Freezing and Thawing²

C 672/C 672M Test Method for Scaling Resistance of Concrete Surfaces Exposed to Deicing Chemicals²

C 702 Practice for Reducing Field Samples of Aggregate to Testing Size²

C 882 Test Method for Bond Strength of Epoxy-Resin Systems Used With Concrete By Slant Shear²

C 1012 Test Method for Length Change of Hydraulic-Cement Mortars Exposed to a Sulfate Solution³

E 96 Test Methods for Water Vapor Transmission of Materials⁴

IEEE/ASTM SI-10 Standard for Use of the International System of Units (SI): The Modern Metric System⁵

3. Materials and Manufacture

3.1 Three types of packaged, dry, rapid-hardening concrete and three types of packaged, dry, rapid-hardening mortar are identified in Table 1.

4. Chemical Composition

4.1 If the material contains soluble chlorides or other ingredients in sufficient quantity to cause corrosion to steel

² Annual Book of ASTM Standards, Vol 04.02.

³ Annual Book of ASTM Standards, Vol 04.01.

⁴ Annual Book of ASTM Standards, Vol 04.06.

⁵ Annual Book of ASTM Standards, Vol 14.02.