

# Masonry and Mortar Testing

## Construction Materials Consultants, Inc.

### LABORATORY TESTING OF BRICK, CONCRETE, & STONE MASONRY UNITS

- Specifications of Clay, Concrete, & Stone Masonry Units (ASTM C—55, 62, 73, 90, 129, 216, 410, 652, 744, 896, 902, 936, 1088, 1209, 1319, etc.)
- Absorption and Saturation Coefficient (ASTM C 67)
- Tests of Concrete Masonry Unit (ASTM C 140)
- Efflorescence (ASTM C 67)
- Freeze-Thaw Durability (ASTM C 67, C 1262)
- Initial Rate of Absorption (ASTM C 67)
- Modulus of Rupture (ASTM C 67)
- Breaking Load (ASTM C 67)
- Weight Per Unit Area, Size, Warpage, Void Area, Out of Square, Length Change, Shell and Web Thickness of Bricks (ASTM C 67)
- Petrographic Examinations (ASTM C 856)
- Compressive Strength (ASTM C 67, C 1388)
- Drying Shrinkage (ASTM C 426)
- Bond Strength (ASTM C 952, C 1357)
- Splitting Tensile Strength (ASTM C 1006)
- Miscellaneous Physical Tests
- Accelerated Weathering (Heating-Cooling, Freezing-Thawing, Wetting-Drying Tests)

### LABORATORY TESTING OF MORTARS & GROUTS

- Cement Specifications (ASTM C 91, C 150, C 1329)
- Mortar & Grout Specifications (ASTM C 270, C 476)
- Aggregate for Mortar & Grout (ASTM C 144, C 404)
- Compressive Strength (ASTM C 109)
- Petrographic Examinations (ASTM C 1324)
- Chemical Analysis (ASTM C 1324)
- Sulfate Content (ASTM C 265, C 1038)
- Drying Shrinkage of Mortar (ASTM C 1148)
- Sulfate Resistance (ASTM C 452, C 1012)
- Determination of Composition and Type M-S-N-O-K (ASTM C 270, ASTM C 1324)
- Matching Existing Mortar or Grout
- Sampling & Testing of Grout (ASTM C 1019)
- Terminology (ASTM C 1180, C 1232)
- Petrographic Examinations, X-ray Diffraction, Sulfate Analysis and Scanning-Electron Microscopical Examinations of fast setting, shrinkage-compensating grouts for evaluating their potential for expansion
- Miscellaneous project-specific tests

# CMC

Construction Materials  
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For detailed information about other testing, evaluation, and consulting services, please visit us online at:

[www.cmc-concrete.com](http://www.cmc-concrete.com)

### FAILURE INVESTIGATION

- Efflorescence
- Cracking
- Masonry—Mortar De-bonding; Bond Failure
- Discoloration & Staining
- Mortar Disintegration
- Dusting, Fracturing
- Water Penetration
- Moisture-Related Damage
- Cyclic Freezing-Related Damage
- Early Freezing of Mortar
- Mortar Over-Sanding
- Low Strength
- Mortar Mismatch