

Standard Physical Property Tests

CTLGroup performs other ASTM tests and standard tests for other agencies such as AASHTO and the Army Corps of Engineers; and other types of tests such as chemical and thermal.

Aggregate

ASTM C 33, Concrete Aggregates
ASTM C 40, Organic Impurities in Fine Aggregates for Concrete
ASTM C 87, Effect of Organic Impurities of Fine Aggregate on Strength of Mortar
ASTM C 88, Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C 117, Materials Finer Than 75- μ m (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C 123, Lightweight Particles in Aggregate
ASTM C 127, Specific Gravity and Absorption of Coarse Aggregate
ASTM C 128, Specific Gravity and Absorption of Fine Aggregate
ASTM C 131, Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Abrasion Machine
ASTM C 136, Sieve Analysis of Fine and Coarse Aggregates
ASTM C 142, Clay Lumps and Friable Particles
ASTM C 227, Potential Alkali Reactivity of Cement-Aggregate Combinations (Mortar-Bar Method)
ASTM C 295, Petrographic Examination of Aggregates for Concrete
ASTM C 330, Lightweight Aggregates for Structural Concrete
ASTM C 331, Lightweight Aggregates for Concrete Masonry Units
ASTM C 332, Lightweight Aggregates for Insulating Concrete
ASTM C 535, Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Abrasion Machine
ASTM C 586, Potential Alkali Reactivity of Carbonate Rocks for Concrete Aggregates (Rock Cylinder Method)
ASTM C 641, Iron Staining Materials in Lightweight Concrete Aggregates
ASTM C 1260, Potential Alkali Reactivity of Aggregates (Mortar Bar Method)

Cement and Cementitious Materials

ASTM C 109, Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or 50-mm Cube Specimens)
ASTM C 150, Specification for Portland Cement
ASTM C 151, Autoclave Expansion of Portland Cement
ASTM C 185, Air Content of Hydraulic Cement Mortar
ASTM C 186, Heat of Hydration of Hydraulic Cement
ASTM C 187, Normal Consistency of Hydraulic Cement
ASTM C 188, Density of Hydraulic Cement
ASTM C 191, Time of Setting of Hydraulic Cement by Vicat Needle
ASTM C 204, Fineness of Hydraulic Cement by Air Permeability Apparatus
ASTM C 265, Calcium Sulfate in Hydrated Portland Cement Mortar
ASTM C 266, Time of Setting of Hydraulic Cement Paste by Gillmore Needles
ASTM C 311, Sampling and Testing Fly Ash or Natural Pozzolans for Use as a Mineral Admixture in Portland Cement Concrete
ASTM C 341, Length Change of Drilled or Sawed Specimens of Hydraulic-Cement Mortar and Concrete
ASTM C 348, Flexural Strength of Hydraulic Cement Mortars
ASTM C 349, Compressive Strength of Hydraulic Cement Mortars (Using Portions of Prisms Broken in Flexure)
ASTM C 359, Early Stiffening of Portland Cement (Mortar Method)
ASTM C 430, Fineness of Hydraulic Cement by the 45- μ m (No. 325) Sieve
ASTM C 441, Effectiveness of Mineral Admixtures or Ground Blast-Furnace Slag in Preventing Excessive Expansion of Concrete Due to the Alkali-Silica Reaction
ASTM C 451, Early Stiffening of Portland Cement (Paste Method)
ASTM C 452, Potential Expansion of Portland Cement Mortars Exposed to Sulfate
ASTM C 465, Processing Additions for Use in the Manufacture of Hydraulic

Cements

ASTM C 563, Optimum SO₃ in Portland Cement
ASTM C 595, Blended Hydraulic Cements
ASTM C 596, Drying Shrinkage of Mortar Containing Portland Cement
ASTM C 618, Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete
ASTM C 807, Time of Setting by Hydraulic Cement Mortar by Modified Vicat Needle
ASTM C 928, Packaged, Dry, Rapid-Hardening Cementitious Materials for Concrete Repairs
ASTM C 989, Ground Granulated Blast-Furnace Slag for Use in Concrete and Mortars
ASTM C 1012, Length Change of Hydraulic-Cement Mortars Exposed to a Sulfate Solution
ASTM C 1240, Silica Fume for Use in Hydraulic-Cement Concrete and Mortar

Concrete

ASTM C 29, Dry Rodded Unit Weight and Voids
ASTM C 31, Making and Curing Concrete Test Specimens in the Field
ASTM C 39, Compressive Strength of Cylindrical Concrete Specimens
ASTM C 42, Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
ASTM C 78, Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)
ASTM C 116, Compressive Strength of Concrete Using Portions of Beams Broken in Flexure
ASTM C 138, Air Content (Gravimetric), Unit Weight, and Yield of Concrete
ASTM C 143, Slump of Hydraulic-Cement Concrete
ASTM C 156, Water Retention by Concrete Curing Materials
ASTM C 157, Length Change of Hardened Hydraulic-Cement Mortar and Concrete
ASTM C 173, Air Content of Freshly Mixed Concrete by the Volumetric Method
ASTM C 192, Making and Curing Concrete in the Laboratory
ASTM C 215, Fundamental Transverse, Longitudinal, and Torsional Frequencies of Concrete Specimens
ASTM C 231, Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C 232, Bleeding of Concrete
ASTM C 233, Air-Entraining Admixtures for Concrete
ASTM C 260, Air-Entraining Admixtures for Concrete
ASTM C 293, Flexural Strength of Concrete (Using Simple Beam with Center Point Loading)
ASTM C 309, Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C 403, Time of Setting of Concrete Mixtures by Penetration Resistance
ASTM C 457, Microscopical Determination of Parameters of the Air-Void System in Hardened Concrete
ASTM C 469, Static Modulus of Elasticity and Poisson's Ratio of Concrete in Compression
ASTM C 494, Chemical Admixtures for Concrete
ASTM C 496, Splitting Tensile Strength of Cylindrical Concrete Specimens
ASTM C 512, Creep of Concrete in Compression
ASTM C 567, Unit Weight of Structural Lightweight Concrete
ASTM C 597, Pulse Velocity Through Concrete
ASTM C 642, Specific Gravity, Absorption, and Voids in Hardened Concrete
ASTM C 666, Resistance of Concrete to Rapid Freezing and Thawing (Proc. A or B)
ASTM C 672, Scaling Resistance to Concrete Surfaces Exposed to Deicing Chemicals
ASTM C 779, Abrasion Resistance of Horizontal Concrete Surfaces
ASTM C 827, Change in Height of Early Ages of Cylindrical Specimens from Cementitious Mixtures
ASTM C 856, Petrographic Examination of Hardened Concrete
ASTM C 876, Half-Cell Potentials of Uncoated Reinforcing Steel in Concrete
ASTM C 882, Bond Strength of Epoxy-Resin Systems Used with Concrete
ASTM C 979, Pigments for Integrally Colored Concrete
ASTM C 1017, Chemical Admixtures for Use in Producing Flowing Concrete
ASTM C 1042, Bond Shear Strength of Latex Systems Used with Concrete by Slant Shear
ASTM C 1084, Portland-Cement Content of Hardened Hydraulic-Cement Concrete
ASTM C 1105, Length Change of Concrete Due to Alkali-Carbonate Rock Reaction
ASTM C 1202, Electrical Penetration of Concrete's Ability to Resist Chloride Ion Penetration
CRD C 39, Coefficient of Linear Thermal Expansion
New York State Department of Transportation Test Method 502-3P, April 1986, "Freezing and Thawing of Portland Cement Cores." Tensile Bond Pull-Off
ACI 211.2, Appendix A - Specific Gravity Factors and Rate of Absorption Determination

Dimension Stone

ASTM C 97, Absorption and Bulk Specific Gravity of Dimension Stone
ASTM C 99, Modulus of Rupture of Dimension Stone
ASTM C 120, Flexural Testing of Slate (Modulus of Rupture, Modulus of Elasticity)
ASTM C 121, Water Absorption of Slate
ASTM C 170, Compressive Strength of Dimension Stone
ASTM C 503, Marble Dimension Stone (Exterior)
ASTM C 568, Limestone Dimension Stone
ASTM C 615, Granite Dimension Stone
ASTM C 616, Quartz-Based Dimension Stone
ASTM C 629, Slate Dimension Stone
ASTM C 880, Flexural Strength of Dimension Stone

Mortar, Grouts, Monolithic Surfacing, and Linings

ASTM C 307, Tensile Strength of Chemical Resistant Mortar, Grouts, and Monolithic Surfacing
ASTM C 308, Working, Setting and Service Strength Setting Times of Chemical-Resistant Resin Mortars
ASTM C 531, Linear Shrinkage and Coefficient of Thermal Expansion of Chemical-Resistant Mortars, Grouts, and Monolithic Surfacing
ASTM C 579, Compressive Strength of Chemical-Resistant Mortars, Grouts, Monolithic Surfacing and Polymer Concretes
ASTM C 580, Flexural Strength and Modulus of Elasticity of Chemical-Resistant Mortars, Grouts, and Monolithic Surfacing
ASTM C 939, Flow of Grout for Pre-Placed Aggregate Concrete (Flow Cone Method)
ASTM C 940, Expansion and Bleeding of Freshly Mixed Grouts for Preplaced-Aggregate Concrete in the Laboratory