

## STANDARD & REFERENCE DOCUMENTS

### American Concrete Institute [ACI]

116R-90 Cement and Concrete Terminology  
117-90 Standard Specifications for Tolerances for Concrete and Materials  
201.2R [Reapproved 1997] Guide to Durable Concrete  
209-92 [Reapproved 1997] Prediction of Creep, Shrinkage, and Temperature Effects in Concrete Structures  
211.1-91 [Reapproved 1997] Selecting Proportions for Normal, Heavyweight and Mass Concrete  
211.2-98/221.2-98 Standard Practice for Selecting Proportions for Structural Lightweight Concrete  
211.3R-97 Guide for Selecting Proportions for No-Slump Concrete  
211.4R-93 [Reap. 1998] Guide for Selecting Proportions for High-Strength Concrete with Portland Cement and Fly Ash  
211.5R-96 Guide for Submittal of Concrete Proportions  
212.3R-91 Chemical Admixtures for Concrete  
212.4R-93 [Reap. 1998] Guide for the Use of High-Range Water-Reducing Admixtures [Superplasticizers] in Concrete  
213R-87 [Reapproved 1999] Guide for Structural Lightweight Aggregate Concrete  
214.3R-88 [Re 1997] Simplified Version of the Recommended Practice for Evaluation of Strength Test Results of Concrete  
216-97 Guide for Determining the Fire Endurance of Concrete Elements  
216.1-97 Standard Method for Determining Fire Resistance of Concrete and Masonry Construction Assemblies  
221R-96 [Reapproved 2001] State-of-the-Art Report on Alkali-Aggregate Reactivity [ACI 221.1R-98]  
222R-96 Corrosion of Metals in Concrete  
223-98 Standard Practice for the Use of Shrinkage-Compensating Concrete  
225R-99 Guide to the Selection and Use of Hydraulic Cements  
229R-99 Controlled Low Strength Materials [CLSM]  
230.1R-90 [Reapproved 1997] State-of-the-Art Report on Soil Cement  
332.1R-00 Use of Raw or Natural Pozzolans in Concrete  
232.2R-96 Use of Fly Ash in Concrete  
233R-95 Ground Granulated Blast-Furnace Slag as a Cementitious Constituent in Concrete  
234R-96 Guide for Use of Silica Fume in Concrete  
301-99/301M-99 Standard Specification for Structural Concrete [Metric]  
302.1R-96 Guide for Concrete Floor and Slab Construction  
303R-91 Guide to Cast-in-Place Architectural Concrete Practice  
304R-89 Guide for Measuring, Mixing, Transporting and Placing Concrete  
304.2R-96 Placing Concrete by Pumping Methods  
304.5R-91 Batching, Mixing and Job Control of Lightweight Concrete  
304.6R-91 Guide for the Use of Volumetric Measuring and Continuous-Mixing Concrete Equipment  
305R-99 Hot Weather Concreting  
306-1-90 Standard Specification for Cold Weather Concreting  
308.92 Standard Practice for Curing Concrete  
308.1-98 Standard Specification for Curing Concrete  
309R.96 Guide for Consolidation of Concrete  
311.4R-00 Guide for Concrete Inspection  
311.5R-97 Batch Plant Inspection and Field Testing of Ready Mix Concrete  
318-02 Building Code Requirements for Structural Concrete  
325.3R-87 Guide for Design of Foundations and Shoulders for Concrete Pavements  
325.9R-91 Guide for Construction of Concrete Pavements and Bases  
347R-94 Guide for Formwork for Concrete  
357R-84 Guide for the Design and Construction of Fixed Offshore Concrete Structures  
357.2R-88 State-of-the-Art Report on Barge-like Concrete Structures  
360R-92 Design of Slabs on Grade  
363R-92 [Reapproved 1997] State-of-the-Art Report on High-Strength Concrete  
363.2R-98 Guide to Quality Control & Testing of High Strength Concrete  
523.1R-92 Guide for Cast-in-Place Low Density Concrete  
523.2R-96 Guide for Precast Cellular Concrete Floor, Roof and Wall Units  
523.3R-93 Guide for Cellular Concrete above 50 pcf and for Aggregate Concrete Above 50 pcf with Compressive Strengths less than 2,500 psi  
533R-93 Guide for Precast Concrete Wall Panels  
544.1R-96 State-of-the-Art on Fiber Reinforced Concrete  
544.2R-89 Measurement of Properties of Fiber Reinforced Concrete

544.3R-93 [Reapproved 1998] Guide for Specifying, Proportioning, Mixing, Placing of Finishing Steel Fiber Reinforced Concrete  
544.4R-88 [Re. 1999] Design Considerations for Steel Fiber Reinforced Concrete  
547R-79 Refractory Concrete State-of-the-Art Report  
548.1R Guide for the Use of Polymers in Concrete  
550R-96 Design Recommendations for Precast Concrete Structures  
551R-92 Tilt-Up Concrete Structures  
SP-2 Manual of Concrete Inspection  
SP-4[95] Formwork for Concrete  
SP-150 Controlled Low-Strength Materials  
SP-71[91] ASTM Standards in ACI 301 & 318  
SP-136 Structural Lightweight Aggregate Concrete Performance

### **ACI Technical Committee**

211 Proportioning Concrete Mixtures  
213 Lightweight Aggregate  
216 Fire Resistance & Fire Protection of Structures  
221 Aggregates  
229 Controlled Low Strength Material  
230 Soil Cement  
308 Curing Concrete  
523 Cellular Concrete

### **Precast / Prestressed Concrete Institute**

Architectural Precast Concrete  
PCI Design Handbook: Precast and Prestressed Concrete  
State-of-the Art of Precast/Prestressed Sandwich Wall Panels [PCI Committee Report]

### **Portland Cement Association**

PCA Design and Control of Concrete Mixtures

### **American Society for Testing and Materials [ASTM]**

A185-01 Standard Specification for Steel Welded Wire Reinforcement, Plain, for Concrete  
A674-00 Standard Practice for Polyethylene Encasement for Ductile Iron Pipe for Water or Other Liquids  
C29/C29M-97 Standard Test Method for Bulk Density [Unit Weight] and Voids in Aggregate  
C31/C31M-00 Standard Proportions for Making and Curing Concrete Test Specimens in the Field  
C33-01 Standard Specifications for Concrete Aggregates  
C34-96 Standard Specification for Structural Clay Load-Bearing Wall Tile  
C39/C39M-99 Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens  
C40-99 Standard Test Method for Organic Impurities in Fine Aggregates for Concrete  
C42/C42M-99 Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete  
C55-01 Standard Specification for Concrete Brick  
C56-96 Standard Specification for Structural Clay Non-Load-Bearing Tile  
C67-01 Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile  
C70-00 Standard Test Method for Surface Moisture in Fine Aggregates  
C78-00 Standard Test Method for Flexural Strength of Concrete [Using Beam with Third-Point Loading]  
C87-83[1995]e1 Standard Test Method for Effect of Organic Impurities in Fine Aggregate on Strength of Mortar  
C90-01 Standard Specifications for Load-Bearing Concrete Masonry Units  
C94/C94M-00e2 Standard Specifications for Ready-Mixed Concrete  
C108-46[1998] Standard Symbols for Heat Transmission  
C109/C109M-99 Standard Test Method for Compressive Strength of Hydraulic Cement Mortars [Using 2-in. or [50-mm] Cube Specimens]  
C113-93[1998] Standard Test Method for Reheat Change of Refractory Brick  
C114-00 Standard Test Methods for Chemical Analysis of Hydraulic Cement  
C117-95 Standard Test Method for Materials Finer than 75- $\mu$ m [#200] Sieve in Mineral Aggregates by Washing  
C118M-99 Standard Specification for Concrete Pipe for Irrigation or Drainage [Metric]  
C123-98 Standard Test Method for Lightweight Particles in Aggregate  
C125-00a Standard Terminology Relating to Concrete and Concrete Aggregate  
C126-99 Standard Specification for Ceramic Glazed Structural Clay Facing Tile, Facing Brick, and Solid Masonry Units

C127-88[1993]e1 Standard Test Method for Specific Gravity and Absorption of Coarse Aggregate  
C128-97 Standard Test Method for Specific Gravity and Absorption of Fine Aggregate  
C129-00a Standard Test Method for Non-Load-Bearing Concrete Masonry Units  
C133-97 Standard Test Methods for Cold Crushing Strength and Modulus of Rupture of Refractories  
C136-96a Standard Test Method for Sieve Analysis of Fine and Coarse Aggregate  
C138-92[2000] Standard Test Method for Unit Weight, Yield, and Air Content [Gravimetric] of Concrete  
C140-01ae1 Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units  
C142-97 Standard Test Method for Clay Lumps and Friable Particles in Aggregates  
C143/143M-00 Standard Test Method for Slump of Hydraulic Cement Concrete  
C150-99a Standard Specification for Portland Concrete  
C163-88[1997] Standard Practice for Mixing Thermal Insulating Cement Samples  
C165-00 Standard Test Method for Measuring Compressive Properties of Thermal Insulations  
C168-01 Terminology Relating to Thermal Insulating Materials  
C172-99 Standard Practice for Sampling Freshly Mixed Concrete  
C173-94ae1 Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method  
C177-97 Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot Plate Apparatus  
C187-98 Test Method for Normal Consistency of Hydraulic Cement  
C192/C192M-00 Standard Practice for Making and Curing Concrete Test Specimens in the Laboratory  
C201-93[1998] Standard Test Method for Thermal Conductivity of Refractories  
C212-00 Standard Specification for Structural Clay Facing Tile  
C231-97e1 Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method  
C232-99 Standard Test Methods for Bleeding of Concrete  
C233-00 Standard Test Methods for Air-Entraining Admixtures for Concrete  
C236-89[1993]e1 Standard Test Method for Steady-State Thermal Performance of Building Assemblies by Means of a Guarded Hot Box  
C260[2000] Standard Specification for Air-Entrained Admixtures for Concrete  
C270-01 Standard Specification for Mortar for Unit Masonry  
C271-99 Standard Test Method for Density of Sandwich Core Materials  
C272-01 Standard Test Method for Water Absorption of Core Materials for Structural Sandwich Constructions  
C273-00e1 Standard Test Method for Shear Properties of Structural Core Materials  
C274-99 Standard Terminology of Structural Sandwich Construction  
C289-01 Standard Test Method for Potential Alkali-Silica Reactivity of Aggregates [Chemical Method]  
C295-98 Standard Guide for Petrographic Examination of Aggregates for Concrete  
C297-94[1999] Standard Test Method for Flatwise Tensile Strength of Sandwich Construction  
C309-98a Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete  
C311-00 Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use as a Admixture in Portland Cement Concrete  
C317/C317M-00 Standard Specification for Gypsum Concrete  
C330-00 Standard Specification for Lightweight Aggregates for Structural Concrete  
C331-00 Standard Specifications for Lightweight Aggregates for Concrete Masonry Units  
C332-99 Standard Specification for Lightweight Aggregates for Insulating Concrete  
C349-97 Standard Test Method for Compressive Strength of Hydraulic Mortars  
C354-97 Standard Test Method for Compressive Strength of Thermal Insulating or Finishing Concrete  
C363-00 Standard Test Method for Delamination Strength of Honeycomb Core Materials  
C364-01 Standard Test Method for Edgewise Compressive Strength of Sandwich Constructions  
C365-00 Standard Test Method for Flatwise Compressive Strength Properties of Sandwich Cores  
C366-99 Standard Test Method for Measurements of Thickness of Sandwich Cores  
C373-88[1999] Standard Test Method for Water Absorption, Bulk Density, Apparent Porosity, and Apparent Specific Gravity of Fired Whiteware Products  
C393-00 Standard Test Method for Flexural Properties of Sandwich Constructions  
C394-00 Standard Test Method for Shear Fatigue of Sandwich Core Materials  
C403/C403M\_99 Standard Test Method for Time of Setting of Concrete Mixtures by Penetration Resistance  
C404-97 Standard Specification for Aggregate for Masonry Grout  
C417-93[1998] Standard Test Method for Thermal Conductivity of Unfired Monolithic Refractories  
C457-98 Standard Test Method for Microscopical Determinations of Parameter of the Air-Void System in Hardened Concrete  
C469-94 Standard Test Method for Static Modulus of Elasticity and Poisson's Ratio of Concrete in Compression  
C480-99 Standard Test Method for Flexure Creep of Sandwich Constructions  
C481-99 Standard Test Method for Laboratory Aging of Sandwich Constructions  
C494/C494M-99a Standard Specifications for Chemical Admixtures for Concrete  
C495-99a Standard Test Method for Compressive Strength of Lightweight Insulating Concrete  
C496-96 Standard Test Method for Splitting Tensile Strength of Cylindrical Concrete Specimens  
C506-00/C506M\_00 Standard Specification for Reinforced Concrete Arch Culvert, Storm Drain, and Sewer Pipe

C507-00/C507M\_00 Standard Specification for Reinforced Concrete Elliptical Culvert, Storm Drain, and Sewer Pipe  
C512-87[1994] Standard Test Method for Creep of Concrete in Compression  
C513-89[1995] Standard Test Method for Obtaining and Testing Specimens of Hardened Lightweight Insulating Concrete for Compressive Strength  
C518-98 Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus  
C566-97 Standard Test Method for Total Evaporable Moisture Content of Aggregate by Drying  
C567-00 Standard Test Method for Density Structural Lightweight Concrete  
C578-95 Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation  
C595-00ae1 Standard Specification for Blended Hydraulic Cements  
C595M-97 Standard Specification for Blended Hydraulic Cements [Metric]  
C611-98 Standard Test Method for Electrical Resistivity of Manufactured Carbon and Graphite Articles at Room Temperature  
C617-98 Standard Practice for Capping Cylindrical Concrete Specimens  
C618-00 Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete  
C634-00 Terminology Related to Environmental Acoustics  
C641-98e1 Standard Test Method for Staining Materials in Lightweight Concrete Aggregates  
C642-97 Standard Test Method for Density, Absorption, and Voids in Hardened Concrete  
C666-97 Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing  
C671-94 Standard Test Method for Critical Dilation of Concrete Specimens Subjected to Freezing  
C684-99 Standard Test Method for Making, Accelerated Curing, and Testing Concrete Compression Test Specimens  
C685/C685M-00a Standard Specification for Concrete made by Volumetric Batching and Continuous  
C709-98 Standard Terminology Relating to Composite Materials  
C728-97e1 Specification for Perlite Thermal Insulation Board  
C773-88[1999] Standard Test Method for Compressive [Crushing] Strength of Fired Whiteware Materials  
C778-00 Standard Specification for Standard Sand  
C780-00 Standard Test Method for Preconstruction and Construction in Evaluation of Mortars for Plain and Reinforced Unit Masonry  
C796-97 Standard Test Method of Testing Foaming Agents for Use in Producing Cellular Concrete Using Preformed Foam  
C803/C803M-97e1 Standard Test Method on Penetration Resistance of Hardened Concrete  
C805-97 Standard Test Method for Rebound Number of Hardened Concrete  
C823-00 Standard Practice for Examination of Samples of Hardened Concrete in Construction  
C825-97 Standard Specifications for Precast Concrete Barriers  
C845-96 Standard Specification for Expansive Hydraulic Cement  
C862-01 Standard Practice for Firing Refractory Concrete Specimens  
C856-95e1 Standard Practice for Petrographic Examination of Hardened Concrete  
C858-83[1997] Standard Specification for Underground Precast Concrete Utility Structures  
C869-91[1999] Standard Specification for Foaming Agents Used in Making Preformed Foam for Cellular Concrete  
C873-99 Standard Test Method for Compressive Strength of Concrete Cylinders Cast in Place in Cylindrical Molds  
C882-99 Standard Test Method for Bond Strength of Epoxy - Resin Systems Used with Concrete by Slant Shear  
C900-99 Standard Test Method for Pullout Strength of Hardened Concrete  
C918-97e1 Standard Test Method for Measuring Early-age Compressive Strength and Projecting Later-Age Strength  
C926-98e Standard Specification for Application of Portland Cement-Based Plaster  
C936-96 Standard Specification for Solid Concrete Interlocking Paving Units  
C939-97 Standard Test Method for Flow of Grout for Preplaced-Aggregate Concrete [Flow Cone Method]  
C976-90[1996]e1 Standard Test Method for Thermal Performance of Building Assemblies by Means of a Calibrated Hot Box  
C979-99 Standard Specification for Pigments for Integrally Colored Concrete  
C985-00/C985M-00 Standard Specification for Nonreinforced Concrete Specified Strength Culvert, Storm Drain, and Sewer Pipe  
C989-99 Standard Specification for Ground Granulated Blast-Furnace Slag for Use in Concrete and Mortars  
C1017/C1017M-98 Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete  
C1019-00b Standard Test Method for Sampling and Testing Grout  
C1026-87[1996] Standard Test Method for Measuring the Resistance of Ceramic Tile to Freeze-Thaw Cycling  
C1058-97 Practice for Selecting Temperatures for Evaluating and Reporting Thermal Properties of Thermal Insulation  
C1064/C1064M-99 Standard Test Method for Temperature of Freshly Mixed Portland Cement Concrete  
C1077-00 Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation  
C1114-00 Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Thin-Heater Apparatus  
C1116-00 Standard Specification for Fiber-Reinforced Concrete and Shotcrete  
C1145-02 Terminology of Advanced Ceramics  
C1155-95[2001] Standard Practice for Determining Thermal Resistance of Building Envelope Components from the In-Situ Data  
C1157-00a Standard Performance Specification for Hydraulic Cement  
C1158-97 Standard Practice for Use and Installation of Radiant Barrier Systems [RBS] in Building Construction  
C1213-98 Standard Terminology Relating to Precast Concrete Products  
C1222-99 Standard Practice for Evaluation of Laboratories Testing Hydraulic Cement

C1227-00b Standard Specification for Precast Concrete Septic Tanks  
C1231/C1231MM-00e1 Standard Practice for Use of Unbonded Caps in Determination of Compressive Strength of Hardened Concrete Cylinders  
C1240-00e1 Standard Specification for Silica Fume for Use as a Mineral Admixture in Hydraulic-Cement Concrete, Mortar & Grout  
C1260-94 Standard Test Method for Potential Alkali Reactivity of Aggregates [Mortar-Bar Method]  
C1262-98 Standard Test Method for Evaluating the Freeze-Thaw Durability of Manufactured Concrete Masonry Units and Related Concrete Units  
C1286-94 Standard Classification for Advanced Ceramics  
C1289-01 Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board  
C1292-00 Standard Test Method for Shear Strength of Continuous Fiber-Reinforced Advanced Ceramics at Ambient Temperatures  
C1319-99 Standard Specification for Concrete Grid Paving Units  
C1323-96[2001] Standard Test Method for Ultimate Strength of Advanced Ceramics with Diametrically Compressed C-Ring Specimens at Ambient Temperatures  
C1338-00 Standard Test Method for Determining Fungi Resistance of Insulation Materials and Facings  
C1362-97 Standard Test Method for Flow of Freshly Mixed Hydraulic Cement Concrete  
C1417-00/C1417M\_00 Standard Specification for Manufacture for Reinforced Concrete Sewer, Storm Drain, and Culvert Pipe for Direct Design  
C1425-99 Standard Test Method for Interlaminar Shear Strength of 1-D and 2-D Continuous Fiber-Reinforced Advanced Ceramics at Elevated Temperatures  
C1436-99 Standard Specification for Materials for Shotcrete  
C1450-00 Standard Specification for Performance of Non-Asbestos Fiber-Reinforced Cement Shake, Shingle, and Slate Roofing Systems  
C1470-00 Standard Guide for Testing the Thermal Properties of Advanced Ceramics  
C1483-00 Standard Specification for Exterior Solar Radiation Control Coatings on Buildings  
C1491-01 Standard Specification for Concrete Roof Pavers  
C1492-01 Standard Specification for Concrete Roof Tile  
C1974-98 Standard Practice for Estimating Concrete Strength by the Maturity Method

D75-97 Standard Practice for Sampling Aggregates  
D153-84[1996]e1 Standard Test Method for Specific Gravity of Pigments  
D422-63[1998] Standard Test Method for Particle-Size of Soils  
D448-98 Standard Classification for Sizes of Aggregate for Road and Bridge Construction  
D558-96 Standard Test Methods for Moisture-Density Relations of Soil-Cement Mixtures  
D559-96 Standard Test Methods for Wetting and Drying Compacted Soil-Cement Mixtures  
D560-96 Standard Test Methods for Freezing and Thawing Compacted Soil-Cement Mixtures  
D570-98 Standard Test Method for Water Absorption of Plastics  
D638-01 Standard Test Methods for Tensile Properties of Plastics  
D648-01 Standard Test Method for Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position  
D653-97[2000] Terminology Relating to Soil, Rock, and Contained Fluids  
D695-02 Standard Test Methods for Compressive Properties of Rigid Plastics  
D698-00a Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort [12,400 ft-lbf/ft<sup>3</sup> [600 kN-m/m<sup>3</sup>]]  
D790-02 Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials  
D792-00 Standard Test Methods for Density and Specific Gravity [Relative Density] of Plastics by Displacement  
D854-00 Standard Test Methods for Specific Gravity of Soil Solids by Water Pycnometer  
D1140-00 Standard Test Methods for Amount of Material in Soils Finer than No. 200 [0.075mm] Sieve  
D 1173 -53[2001] Standard Test Method for Foaming Properties of Surface-Active Agents Used in Making Cellular Concrete  
D1196-93[1997] Standard Test Methods for Nonrepetitive Static Plate Load Tests of Soils and Flexible Pavement Components for Use in Evaluation and Design of Airport and Highway Pavements  
D1505-98e1 Standard Test Method for Density of Plastics by the Density-Gradient Technique  
D1556-00 Standard Test Method for Density and Unit Weight of Soil in Place by the Sand Cone Method  
D1558-99 Standard Test Method for Moisture Content Penetration Resistance Relationships of Fine-Grained Soils.  
D1633-00 Standard Test Method for Compressive Strength of Molded Soil-Cement Cylinders  
D1634-00 Standard Test Method for Compressive Strength of Soil-Cement Using Portions of Beams Broken in Flexure [Modified Cube Method]  
D2216-98 Standard Test Method for Laboratory Determination of Water [Moisture] Content of Soil and Rock by Mass  
D248700 Standard Classification of Soils for Engineering Purposes [Unified Soil Classification System]  
D2488-00 Standard Practice for Description & Identification of Soils [Visual-Manual Procedure]  
D2844-94 Standard Test Method for Resistance R-Value & Expansion Pressure of Compacted Soils  
D2922-00 Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods [Shallow Depth]  
D2937-00 Standard Test Method for Density of Soil in Place by the Drive-Cylinder Method  
D3017-96e1 Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Method [Shallow Depth]

D3282-93[1997]e1 Standard Classifications of Soils and Soil-Aggregate Materials for Highway Construction Purposes  
D3665-99 Standard Practice for Random Sampling of Construction Materials  
D3740-99c Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction  
D3846-02 Standard Test Method for In-Plane Shear Strength of Reinforced Plastics  
D3878-01 Standard Terminology of Composite Materials  
D4102-82[1999] Standard Test Method of Thermal Oxidative Resistance of Carbon Fibers  
D4220-95[2000] Practices for Preserving and Transporting Soil Samples  
D4258-83[1999] Standard Practice for Surface Cleaning Concrete for Coating  
D4380-84[1993]e1 Standard Test Method for Density of Bentonitic Slurries  
D4429-93 Standard Test Method for CBR [California Bearing Ratio] of Soils in Place  
D4496-87[1998]e1 Standard Test Method for D-C Resistance or Conductance of Moderately Conductive Materials  
D4609-94e1 Standard Guide for Evaluating Effectiveness of Chemicals for Soil Stabilization  
D4832-95e1 Standard Test Method for Preparation and Testing of Controlled Low Strength Material [CLSM] Test Cylinders  
D4914-99 Test Methods for Density of Soil and Rock in Place by the Sand Replacement Method in a Test Pit  
D5030-89[1994]e1 Standard Test Method for Density of Soil and Rock in Place by the Water Replacement Method in a Test Pit  
D5048-97 Standard Test Method for Measuring the Comparative Burning Characteristics and Resistance to Burn-Through of Solid Plastic Using 125-mm Flame  
D5057-90[2001] Standard Test Method for Screening Apparent Specific Gravity and Bulk Density of Waste  
D5239-98 Standard Practice for Characterizing Fly Ash for Use in Soil Stabilization  
D5312-92[1997] Standard Test Method for Evaluation of Durability of Rock for Erosion Control Under Freezing and Thawing Conditions  
D5379/5379M-98 Standard Test Method for Shear Properties of Composite Materials by the V-Notched Beam Method  
D5778-95[2000] Standard Test Method for Performing Electronic Friction Cone and Piezocone Penetration Testing of Soils  
D5860-95 Standard Test Method for Evaluation of the Effect of Water Repellent Treatments on Freeze-Thaw Resistance of Hydraulic Cement Mortar Specimens  
D5971-96 Standard Practice for Sampling Freshly Mixed Controlled Low Strength Material  
D6023-96 Standard Test Method for Unit Weight, Yield, Cement Content, and Air Content [Gravimetric] of Controlled Low Strength Material [CLSM]  
D6024-96 Standard Test Method for Ball Drop on Controlled Low Strength Material [CLSM] to Determine Suitability for Load Applications  
D6103-97 Standard Test Method for Flow Consistency of Controlled Low Strength Material [CLSM]  
D6489-99 Standard Test Method for Determining the Water Absorption of Hardened Concrete Treated with a Repellent Coating

E72-98 Standard Test Methods for Conducting Strength Tests of Panels for Building Construction  
E84-01 Test Method for Surface Burning Characteristics of Building Materials  
E90-99 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements  
E96-00 Test Method for Water Vapor Transmission of Material  
E119-00a Standard Test Methods for Fire Tests of Building Construction and Materials  
E154-99 Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover  
E176-01 Standard Terminology of Fire Standards  
E288-94[1998] Standard Specifications for Laboratory Glass Volumetric Flasks  
E330-97e1 Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference  
E336-97 Standard Test Method for Measurement of Airborne Sound Insulation in Buildings  
E413-87[1999] Standard Classification for Rating Sound Insulation  
E488-96 Standard Test Methods for Strength of Anchors in Concrete and Masonry Elements  
E575-99 Standard Practice for Reporting Data from Structural Tests of Building Constructions, Elements, Connections, and Assemblies  
E605-93[2000] Standard Test Methods for Thickness and Density of Sprayed Fire-Resistive Material [SFRM] Applied to Structural Members  
E621-94[1999]e1 Standard Practice for the Use of Metric [SI] Units in Building Design and Construction  
E631-93a[1998]e1 Standard Terminology of Building Constructions  
E695-79[1997]e1 Standard Method for Measuring Relative Resistance of Wall, Floor, and Roof Construction to Impact Loading  
E729-96 Standard Guide for Conducting Acute Toxicity Tests on Test Materials with Fishes, Macroinvertebrates, and Amphibians  
E760-92[2000] Standard Test Method for Effect of Impact on Bonding of Sprayed Fire-Resistive Materials Applied to Structural Members  
E761-92[2000] Standard Test Method for Compressive Strength of Sprayed Fire-Resistive Material Applied to Structural Members  
E800-99 Guide for Measuring of Gases Present or Generated During Fires  
E833-01a Standard Terminology of Building Economics

E937-93[2000] Standard Test Method for Corrosion of Steel by Sprayed Fire-Resistive Material [SFRM] Applied to Structural Members  
E1050-98 Standard Test Method for Impedance and Absorption of Acoustical Materials Using a Tube, Two Microphones, and a Digital Frequency Analysis System  
E1225-99 Standard Test Method for Thermal Conductivity of Solids by Means of the Guarded-Comparative-Longitudinal Heat Flow Technique  
E1266-88[1999] Standard Practice for Processing Mixtures of Lime, Flyash, and Heavy Metal Wastes in Structural Fills and other Construction Applications  
E1321-97a Standard Test Method for Determining Material Ignition and Flame Spread  
E1725-95[2001] Standard Test Methods for Fire Tests of Fire-Resistive Barrier Systems for Electrical System Components  
E1730-99 Standard Specification for Rigid Foam for Use in Structural Sandwich Panel Cores  
E1907-97 Standard Guide for Determining Moisture-Related Acceptability of Concrete Floors to Receive Moisture-Sensitive Finishes  
E2122-01 Standard Guide for Conducting In-situ Field Bioassays with Marine, Estuarine, and Freshwater Bivalves  
E2127-01a Standard Methods of Static Load Test for Combined tensile and Transverse Load Resistance of Paneled Wall Systems in Building Construction  
E2151-01 Standard Terminology of Guides for Specifying and Evaluating Performance of Single Family Attached and Detached Dwellings  
E2156-01 Standard Guide for Evaluating Economic Performance of Alternative Designs, Systems, and Materials in Compliance with Performance Standard Guides for Single-Family Attached and Detached Dwellings  
  
F1166-95a [2000] Standard Practice for Human Engineering Design for Marine Systems, Equipment and Facilities  
  
IEEE/ASTM SI-10 Standard Practice for Use of the International System of Units [SI]: The Modern Metric System  
  
R0030 Manual of Aggregate and Concrete Testing  
  
STP 169C Significance of Tests and Properties of Concrete and Concrete-Making Materials

### **ASTM Technical Committee**

C01 Cement  
C09 Concrete and Concrete Aggregates  
C27 Precast Concrete Products  
C16 Thermal Insulation  
D04 Road and Paving Materials  
D18 Soil and Rock  
E05 Fire Standards  
E06 Performance of Buildings  
E07 Testing [nondestructive]

### **National Institute of Standards and Technology [NIST]**

Building and Fire Research Laboratory [BFRL]  
Construction Materials Reference Laboratory [CMRL]

### **International Federation for Structural Concrete [ fib - fédération internationale du béton ]**

CEB European Committee for Concrete [ CEB Comité Euro-International du Béton ]  
FIP International Federation for Precast/Prestressing [ FIP Fédération de la Précontrainte ]

### **International Organization for Standardization [ISO]**

ISO 64-97 Guide for inclusion of environmental aspects in product standards  
ISO 140-5:1998 Acoustics - Measurement of sound insulation in buildings and of building elements  
ISO 304:1985 Surface active agents - Determination of surface tension by drawing up liquid films  
ISO 679:1989 Methods of testing cements- determination of strength  
ISO 696 Surface active agents - Measurement of foaming power - Modified Ross-Miles method  
ISO 834-1:1999 Fire-resistance tests - Elements of building construction - Part 1 : General requirements  
ISO 834-3 Fire resistance tests - Elements of building construction - Part 3: Commentary on test method and test data application  
ISO 862 Surface active agents- Vocabulary  
ISO 896 Surface active agents - Scientific classification

ISO 1000:1992 SI units & recommendations for the use of their multiples and of certain other units  
ISO 1063 Surface active agents - Determination of stability in hard water  
ISO 1064 Surface active agents; determination of apparent density of pastes on filling  
ISO 1182 Fire tests; Building materials; Non-combustibility test  
ISO 1716 :2002 Reaction to fire tests for building products - Determination of the heat of combustion  
ISO 1920:1976 Concrete tests - Dimensions, tolerances and applicability of test specimens  
ISO 2076:1999 Textiles-man made fibers-Generic names  
ISO 2131 Surface active agents - Simplified classification  
ISO 2227 Formaldehyde solutions for industrial use \_ Determination of formaldehyde content  
ISO 2268 Surface active agents [non-ionic] - Determination of polyethylene glycols and non-ionic matter [adducts]  
ISO 2736-1:1986 Concrete tests - Test specimens - Part 1 - Sampling of fresh concrete  
ISO 2736-2:1986 Concrete Tests – Test specimens - Part 2 : Making and curing of test specimens for strength tests  
ISO/TR 3814 Tests for measuring "reaction-to-fire" of building materials; Their development and application  
ISO 3893:1977 Concrete - Classification by compressive strength  
ISO/TR 3956 Principles of structural fire-engineering design with special regard to the connection between real fire exposure and the heating conditions of the standard fire-resistance test [ISO 834]  
ISO 4012 Concrete - Determination of compressive strength of test specimen  
ISO 4013 Concrete - Determination of flexural strength of test specimens  
ISO 4103 Concrete - Classification of consistency  
ISO 4108 Concrete - Determination of tensile splitting strength of test specimens  
ISO 4109:1980 Fresh concrete - Determination of the consistency - slump test  
ISO 4318 Surface active agents - Determination of water content - Azeotropic distillation method  
ISO 4365 Liquid flow in open channels; Sediment in stream and canals; Determination of concentration, particle size distribution and relative density  
ISO 4898 Cellular plastics; Specifications for rigid cellular materials used in the thermal insulation of buildings  
ISO 5018 Refractory materials, Determination of true density  
ISO 5657 Reaction to fire tests - Ignitability of building products using a radiant heat source  
ISO/TR 5658-1 Reaction to fire tests - Spread of flame - Part 1: Guidance on flame spread  
ISO/TR 5658-2 Reaction to fire tests - Spread of flame - Part 2: Lateral spread on building products in vertical configuration  
ISO 5660-1 Fire tests; Reaction to fire; Part 1: Rate of heat release from building products  
ISO 6060:1989 Water quality - Determination of the chemical oxygen demand  
ISO 6240:1980 Performance standards in building - Contents and presentation  
ISO 6241:1984 Performance standards in building - Principles for their preparation and factors to be considered  
ISO 6274 Concrete - Sieve analysis of aggregates  
ISO 6275:1982 Concrete hardened - Determination of density  
ISO 6276 Concrete; compacted fresh; Determination of density  
ISO 6388 Surface active agents - Determination of flow properties using a rotational viscometer  
ISO 6512:1982 Building construction - Modular coordination - Story heights and room heights  
ISO 6782:1982 Aggregates for concrete - Determination of bulk density  
ISO 6783 Coarse aggregates for concrete; Determination of particle density and water absorption, Hydrostatic balance method  
ISO 6784 Concrete - Determination of static modulus of elasticity in compression  
ISO 6946:1996 Building components and building elements - Thermal resistance and thermal transmittance - Calculation method  
ISO 7033:1987 Fine and coarse aggregates for concrete - Determination of the particle mass - per - volume and water absorption: Pycnometer method  
ISO 7203-1 Fire extinguishing media - Foam concentrates - Part 1: Specification for low expansion foam concentrates for top application to water-immiscible liquids  
ISO 7203-2 Fire extinguishing media - Foam concentrates - Part 2: Specification for medium and high expansion foam concentrates for top application to water-immiscible liquids  
ISO 7203-3 Fire extinguishing media - Foam concentrates - Part 3: Specification for low expansion foam concentrates for top application to water-miscible liquids  
ISO 7345 Thermal insulation; physical quantities and definitions  
ISO 7361:1986 Performance standards in building - Presentation of performance levels of facades made of same - source components  
ISO 7892:1998 Vertical building elements - Impact resistance tests -Impact bodies and general test procedures  
ISO 8840 Refractory materials; determination of bulk density of granular materials [grain density]  
ISO 9000-2000 Quality Management: Fundamentals on vocabulary  
ISO 9001-2000 Quality Management Systems - Requirements  
ISO 9002:1994 Quality System - Model for Quality Assurance in Production, in Installation and Servicing  
ISO/TR 9122-5 Toxicity testing of fire effluents; Part 5: Prediction of toxic effects of fire effluents  
ISO 9194 Bases for design of structures; actions due to the self-weight of structures, non-structural elements and stored materials; density  
ISO 9705 Fire tests; Full-scale room test for surface products



ISO 9924-2 Rubber and rubber products - Determination of the composition of vulcanizates and compounds by thermogravimetry - Part 2: Acrylonitrile-butadiene and halobutyl rubbers  
ISO/TR 10158 Principles and rationale underlying calculation methods in relation to fire resistance of structural elements  
ISO 10211:1995 Thermal bridges in building construction – Heat flows and surface temperature - Part 1 General calculation methods  
ISO 10456-1997 [E] Building materials and products - Procedures for determining declared and design thermal values  
ISO/TR 11696-2:1999 Uses of reaction to fire test results - Part 2: Fire hazard assessment of construction products  
ISO/TR 12470:1998 Fire resistance tests - Guidance on the application and extension of results  
ISO 13786:1999 Thermal performance of building components - Dynamic thermal characteristics - calculation methods  
ISO 13793:2001 Thermal performance of buildings - Thermal design of foundations to avoid frost heave  
ISO 14000-00 Environmental Management Systems  
ISO/TR 14697 Fire tests - Guidance of the choice on substrates for building products

ISO/DIS 14832-1 Fire resistance tests – Load-bearing elements of building construction - Part 1: Requirements for vertical separating load-bearing elements  
ISO/DIS 14832-2 Fire resistance tests - Load bearing elements of building construction - Part 2: Requirements for horizontal separating load-bearing elements  
ISO/DIS 14832-3 Fire resistance tests – Load-bearing elements of building construction- Part 3: Requirements for beams  
ISO/DIS 14832-4 Fire resistance tests – Load-bearing elements of building construction - Part 4: Requirements for columns

### **National Standards System Network / National Resource for Global Standards [NSSN] [ANSI]**

ANSI A37.19 Compressive Strength of Thermal Insulation  
ANSI A164.1 Structural Lightweight Concrete  
ANSI/ASAE S289.2-98 Concrete Slip Form Canal Linings

### **American Society of Civil Engineers [ASCE]**

ASCE 7-95 Minimum Design Loads for Buildings and Other Structures

### **European Committee for Standardization [CEN-Comité Européen de Normalisation]**

SIA 162.107 Determination of the dry density of lightweight aggregate concrete with open structure  
SIA V 162.005 Eurocode 2: Design of concrete structures - Part 1-4: General rules; lightweight aggregate concrete with closed structures  
SIA 162.109 Determination of static modulus of elasticity under compression of autoclaved aerated concrete or lightweight aggregate concrete with open structure  
SIA 162.105 Test methods for verification of corrosion protection of reinforcement in autoclaved aerated concrete and lightweight aggregate concrete with open structure  
SIA 162.113 Performance test for prefabricated reinforced components of autoclaved aerated concrete or lightweight aggregate concrete with open structure under transverse load  
SIA 279.066 Thermal insulating products for building applications - Determination of compressive behaviour  
SIA 162.111 Determination of compressive strength of lightweight aggregate concrete with open structure  
SIA 215.011 Methods of testing cement - Part 1: Determination of compressive strength  
SIA V 160.004 Eurocode 1: Basis of design and actions on structures - Part 2-2: Actions on structures - Actions on structures exposed to fire  
SIA V 161.002 Eurocode 3 - Design of steel structures - Part 1-2 General rules; Structural fire design

VDI 3490 Measurements of gases; calibration gas mixture; determination of the composition by gas density measuring techniques, gas density balance

### **German Institute for Standardization [DIN-Deutsches Institut für Normung e.V.]**

DIN EN 990 Test methods for verification of corrosion protection of reinforcement in autoclaved aerated concrete and lightweight aggregate concrete with open structure  
DIN EN 991 Determination of the dimension of prefabricated reinforced components made of autoclaved aerated concrete or lightweight aggregate concrete with open structure  
DIN EN 992 Determination of the dry density of lightweight aggregate concrete with open structure  
DIN 1045-2 Concrete, reinforced and prestressed Concrete Structures - Part 2: Concrete, Specification, Properties, Production and Conformity  
DIN 1045-4 Concrete, reinforced and prestressed Concrete Structures Part 4: Additional rules for the Production and Conformity Control of Prefabricated Elements

DIN 1048-2 Testing Concrete; testing of hardened concrete [specimens taken in situ]  
DIN 1048-4 Test methods for concrete; determination of the compressive strength in hardened concrete in structures and components; application of reference lines and evaluation with special methods  
DIN 1048-5 Testing concrete; testing of hardened concrete [specimens prepared in mould]  
DIN 1055-2 Design Loads for Buildings; Soil Characteristics, Specific weight, Angle of Friction, Cohesion, Angle of Wall Friction  
DIN EN 1094-5 Insulating refractory products - Part 5: Determination of cold crushing strength of shaped products  
DIN EN 1352 Determination of static modulus of elasticity under compression of autoclaved aerated concrete or lightweight aggregate concrete with open structure  
DIN EN 1354 Determination of compressive strength of lightweight aggregate concrete with open structure  
DIN EN 1355 Determination of creep strains under compression of autoclaved aerated concrete or lightweight aggregate concrete with open structure  
DIN EN 1356 Performance test for prefabricated reinforced components of autoclaved aerated concrete or lightweight aggregate concrete with open structure under transverse load  
DIN EN 1364-4 Fire resistance tests on non-load bearing elements - Part 4: Curtain Walling  
DIN EN 1367-4 Tests for thermal and weathering properties of aggregates - Part 4: Determination of drying shrinkage  
DIN EN 1520 Prefabricated components of lightweight aggregate concrete with open structure  
DIN EN 1521 Determination of flexural strength of lightweight aggregate concrete with open structure  
DIN EN 1737 Determination of shear strength of welded joints of reinforcement mats or cages for prefabricated components made of autoclaved aerated concrete or lightweight aggregate concrete with open structure  
DIN EN 1739 Determination of shear strength for in-plane forces of joints between prefabricated components made of autoclaved aerated concrete or lightweight aggregate concrete with open structure  
DIN EN 1740 Performance Test for Prefabricated Reinforced Components Made of Autoclaved Aerated Concrete or Lightweight Aggregate Concrete with Open Structure Under Predominantly Longitudinal Load [Vertical Components]  
DIN EN 1741 Determination of shear strength for out-of-plane forces of joints between prefabricated components made of autoclaved aerated concrete or lightweight aggregate concrete with open structure  
DIN EN 1742 Determination of shear strength between different layers or multilayer concrete made of autoclaved aerated concrete or lightweight aggregate concrete with open structure  
DIN EN 1926 Natural stones test methods - Determination of compressive strength  
DIN ENV 1992-1-4 Eurocode 2: Design of concrete structures. Part 1-4: General rules. Lightweight aggregate concrete with closed structure  
DIN 4028 Reinforced Concrete Slabs Made of Lightweight Concrete with Internally Porous Texture; Requirements, Testing, Design, Construction, Installation  
DIN 4102-1 Fire behavior of building materials and building components - Part 1: Building materials; concepts, requirements and tests  
DIN 4102-2 Fire Behavior of Building Materials and Building Components; Building Components; Definitions, Requirements and Tests  
DIN 4101-3 Fire Behavior of Building Materials and Building Components; Fire Walls and Non-load-bearing External Walls; Definitions, Requirements and Tests  
DIN 4102-4 Fire behavior of building materials and building components; synopsis and application of classified building materials, components and special components  
DIN 4102-5 Fire Behavior of Building Materials and Building Components; Fire Barriers, Barriers in Lift Wells and Glazings Resistant against Fire; Definitions, Requirements and Tests  
DIN 4102-7 Fire behavior of building materials and building components - Part 7: Roofing; definitions, requirements and testing  
DIN 4102-8 Fire behavior of building materials and components; small scale test furnace  
DIN 4102-17 Fire behavior of building materials and elements; determination of melting point of mineral fiber insulating materials; concepts, requirements and testing  
DIN 4108-3 Thermal protection and energy economy in buildings - Part 3 : Protection against moisture subject to climate conditions; Requirements and directions for design and construction  
DIN V 4108-4 Thermal insulation and energy economy in buildings - Part 4: Hydrothermal design values  
DIN 4132 No Fines Lightweight Concrete Walls; Design & Construction  
DIN 4164 Aerated and foamed concrete; production, utilization and testing ; guidelines  
DIN 4219 P1 Lightweight concrete and reinforced lightweight concrete of dense structure; properties, manufacture and inspection  
DIN 4219 P2 Lightweight Concrete and reinforced lightweight concrete of dense structure; design and construction  
DIN 4226-2 Aggregates for concrete and mortar - Part 2 Lightweight aggregates  
DIN 4227 P4 Prestressed concrete, prestressed lightweight concrete structural components  
DIN 4232 No fines lightweight concrete walls, design and construction  
DIN EN 12390-7 Testing hardened concrete - Part 7; Density of hardened concrete  
DIN EN 12394 Testing concrete - Determination of compressive strength of test specimens  
DIN EN 12843 Precast concrete masts and poles  
DIN EN 13009 Hygrothermal performance of building materials and products - Determination of hygric expansion coefficient  
DIN EN 13198 Precast concrete products - Street furniture and garden products  
DIN EN 13279-2 Gypsum and gypsum based building plaster - Part 2: Test methods  
DIN EN 13693 Special precast prestressed concrete roof elements

DIN 18122-2 Soil-investigation and testing - Part 2: Determination of the shrinkage limit  
DIN 18136 Soil - Investigation and testing - unconfined compression test  
DIN 18148 Lightweight concrete hollow-boards  
DIN 18162 Lightweight concrete wallboards, unreinforced  
DIN 18218 Pressure of fresh concrete on vertical formwork  
DIN 51043 Testing of ceramic materials; unshaped refractory materials; Test of the characteristics of test pieces during or after firing  
DIN 52170-1 Determination of composition of hardened concrete; general terms, sampling dry-bulk density  
DIN 52251-5 Indirect methods of determining the frost resistance of roofing tiles; Determination of drying shrinkage and firing shrinkage  
DIN 52450 Testing of inorganic non-metallic building materials: Determination of shrinkage and expansion on small specimens

### **Austrian Standards Institute [ON-Österreichisches Normungsinstitut]**

OENORM B 3358-3 Non-load bearing interior wall systems-Part 3: Systems made of concrete blocks of normal-or lightconcrete  
OENORM B 4200-11 Lightweight concrete - Production and quality control  
OENORM EN 990 Test methods for verification of corrosion protection of reinforcement in autoclaved aerated concrete and lightweight aggregate concrete with open structure  
OENORM EN 991 Determination of the dimensions of prefabricated reinforced components made of autoclaved aerated concrete or lightweight aggregate concrete with open structure  
OENORM EN 992 Determination of the dry density of lightweight aggregate concrete with open structure  
OENORM EN 1352 Determination of static modulus of elasticity under compression of autoclaved aerated concrete or lightweight aggregate concrete with open structure  
OENORM EN 1354 Determination of compressive strength of lightweight aggregate concrete with open structure  
OENORM EN 1355 Determination of creep strains under compression of autoclaved aerated concrete or lightweight aggregate concrete with open structure  
OENORM EN 1356 Performance test for prefabricated reinforced components of autoclaved concrete or lightweight aggregate concrete with open structure under transverse load  
OENORM EN 1520 Prefabricated components of lightweight aggregate concrete with open structure  
OENORM EN 1521 Determination of flexural strength of lightweight aggregate concrete with open structure  
OENORM EN 1739 Determination of shear strength for in-plane forces of joints between prefabricated components made of autoclaved aerated concrete or lightweight aggregate concrete with open structure  
OENORM EN 1740 Performance test for prefabricated components made of autoclaved aerated concrete or lightweight aggregate concrete with open structure under predominantly longitudinal load [vertical components]  
OENORM EN 1741 Determination of shear strength for out-of-plane forces of joints between prefabricated components made of autoclaved aerated concrete or lightweight aggregate concrete with open structure  
OENORM EN 1742 Determination of sheer strength between different layers of multilayer components made of autoclaved aerated concrete or lightweight aggregate concrete with open structure  
OENORM EN 1992-1-4 Eurocode 2: Design of concrete structures - Part 1-4: General rules - Lightweight aggregate concrete with closed structure  
OENORM 4414-1 Earthwork and foundation engineering; Analysis of soil specimen bulk density [Lab method]  
OENORM 4414-2 Geotechnical engineering [foundation engineering] analysis of soil specimens, determination of bulk density

### **Japanese International Standards [JIS] [JSA]**

JSI A 1161: Testing methods for bulk specific gravity, water content, absorption and compressive strength of cellular concrete  
JSI A 1162: 1973 Testing methods for volumne change of cellular concrete

### **International Bureau for the Standardization of Man-Made Fibers [BISFA]**

Terminology of Fibers

## **NOTICE**

\*Standards/Specifications are constantly changing. Check with organizations for most recent revisions or latest publications.

