

## TECHNICAL DOCUMENTS

### ACI 329.1T-18: TechNote: Minimum Cementitious Materials Content in Specifications

This TechNote discusses the implications of minimum cementitious materials content in project specifications (NRMCA 2015a).

### ACI 332.1R-18: Guide to Residential Concrete Construction

This guide provides practical information about the construction of residential concrete that meets or exceeds code requirements. It covers concrete work for one- and two-family dwellings with a maximum height of three stories above grade and a basement that is either cast-in-place or placed as precast members.

### ACI 364.16T-18: TechNote: Physical Properties and Characteristics Affecting the Sensitivity to Cracking of Cementitious Repair Materials

One of the main factors assuring the durability and long-term performance of concrete repairs is its resistance to cracking.

### ACI 364.17T-18: TechNote: How to Measure pH of a Concrete Surface Prior to Installation of a Floor Covering

A review of published literature indicates that there is plenty of information regarding the pH of concrete as it relates to carbonation, embedded steel corrosion, alkali-silica reaction, and effects of mineral admixtures such as fly ash and silica fume.

### ACI 550.5-18: Code Requirements for the Design of Precast Concrete Diaphragms for Earthquake Motions (ACI 550.5) and Commentary (ACI 550.5R)

This standard describes code requirements for the design of precast concrete diaphragms subject to earthquake motions where used under the design provisions of ASCE/SEI 7-16 Section 12.10.3 and ACI 318.

### CP-3 1st Ed. Technician Workbook for ACI Certification of Self-Consolidating Concrete Testing Technician

This workbook provides study information and instructional material on the required ASTM testing procedures.

### The Reinforced Concrete Design Handbook (Metric)

*The Reinforced Concrete Design Handbook* provides assistance to professionals engaged in the design of reinforced concrete buildings and related structures.

### Evaluation of Concrete Bridge Behavior through Load Testing - International Perspectives (SP-323)

Load testing of concrete bridges is a practice with a long history. Historically, and particularly before the unification of design and construction practices through codes, load testing was performed to show the travelling public that a newly built bridge was safe for use.

### Composites with Inorganic Matrix for Repair of Concrete and Masonry Structures (SP-324)

This SP aims to bring to the attention of the technical community the progress being made on a new class of repair/strengthening materials for concrete and masonry structures.

## ACI UNIVERSITY ONLINE COURSES

### On-Demand Course: Coarse and Fine Lightweight Aggregates for Use in Concrete

Learning Objectives:

1. Explain the process of mining and expanding shale into lightweight aggregate (LWA).
2. Describe the benefits of using LWA in concrete mixtures.
3. Identify the difference between absorbed and surface moisture in LWA.
4. Explain the mechanism and benefits of internal curing in concrete.

**Continuing Education Credit: 0.1 CEU (1.0 PDH)**

### On-Demand Course: Electrical Methods for Evaluating Mass Transport Properties of Concrete

Learning Objectives:

1. Identify modeling approaches that can derive chloride diffusion to help predict chloride egress in tested hardened concrete
2. Describe different factors that affect resistivity tests of concrete that is used to predict chloride diffusion and chloride penetration
3. Explain the formation factor and how it is related to the pore structure and pore conductivity of concrete
4. Explain advantages of bulk resistivity tests on concrete core samples for fluid penetration resistance and factors that could negatively affect accurate results of the test.

**Continuing Education Credit: 0.1 CEU (1.0 PDH)**