



BUILDINGS BULLETIN 2009-019
OTCR

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Purpose: This bulletin establishes acceptance criteria for adhesive anchoring systems installed in concrete elements as alternative materials in the 2008 NYC Construction Codes.

Related Code Section(s): BC 1704.13 MC 1210.3
BC 1913

Subject(s): Concrete, Anchors, Adhesive Anchoring; Chemical Anchoring; Bonded Anchoring

Description: Adhesive anchoring systems are comprised of chemical compounds and anchoring hardware, installed in holes drilled in hardened concrete.

Evaluation Scope: 2008 NYC Construction Codes

Evaluation Criteria: Pursuant to AC 28-113, the Office of Technical Certification and Research recognizes adhesive anchoring systems tested, designed and evaluated in accordance with ICC-ES AC308 "*Acceptance Criteria for Post-Installed Adhesive Anchors in Concrete Elements*"¹ as an alternative to concrete anchorage material governed by section BC 1913. Acceptable adhesive anchoring systems shall have an ICC-ES Evaluation Service Report ("ESR") issued in accordance with AC308 and shall comply with the conditions of this bulletin.

Uses: Adhesive anchors are used to resist tension, shear and moment forces in cracked and uncracked, normal- and lightweight concrete.

Conditions of Acceptance: Adhesive anchors shall be designed and installed in accordance with the 2008 NYC Construction Codes and other applicable provisions including but not limited to the following:

A. Design

1. Adhesive anchoring systems shall be designed in accordance with ICC-ES

- AC308, Annex A, Section 3.0 (Design Requirements). Design of adhesive anchoring systems shall be performed by a registered design professional.
2. Anchorage used in high pressure steam piping systems shall comply with the following:
 - a. New and existing anchorage shall be subject to annual inspection per section MC 1210.3.1, and
 - b. Repair, replacement and relocation of anchorage shall not be permitted without approval from the Department of Buildings as per section MC 1210.3.2.

B. Installation Requirements

1. Installation requirements shall be in accordance with the manufacturer's instructions, the applicable ICC-ES ESR, and the conditions of this bulletin.
2. Pursuant to section BC 1704.13, adhesive anchoring installation shall be subject to special inspection requirements of Chapter 17 of the Building Code and 1 RCNY section 101-06. Special Inspectors of adhesive anchoring systems shall:
 - a. Maintain the same qualification requirements for the "Concrete – Cast-in-place and Precast" category as defined in 1 RCNY section 101-06, Appendix A.
 - b. Have duties and responsibilities in accordance with, but not limited to, the ICC-ES ESR issued for the installed product, and
 - c. Complete the statement of special inspection by referencing this Bulletin under the Special Inspection Item for "Alternative Materials" in section 3.0 of the TR1 form.
3. Adhesive anchor shall be identified by labels on the packaging including manufacturer's name, product designation and the requirements specified in ICC-ES AC308, Annex A, Section 6.4 and Section 12.1.5.

Reference Standards:

1. ICC-ES AC308 "*Acceptance Criteria for Post-Installed Adhesive Anchors in Concrete Elements*", dated October 2008 (<http://www.icc-es.org/>).