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RESEARCH REPORT: RR 25113  
(CSI # 03150)

BASED UPON ICC EVALUATION SERVICE  
REPORT NO. ESR-1702

REEVALUATION DUE DATE:  
February 1, 2011  
Issued Date: February 1, 2010  
Code: 2008 LABC

**GENERAL APPROVAL** - CIA-Gel 7000 and Epoxy Acrylate for Masonry and Un-reinforced Brick Anchorage

**DETAILS**

CIA-Gel 7000 and Epoxy Acrylate are approved when in compliance with the description, use, identification and findings of Report No.ESR-1702, dated March 1, 2008, of the ICC Evaluation Service, Incorporated. The report, in its entirety, is attached and made part of this general approval.

The parts of Report No.ESR-1702 marked by the asterisks have been removed by the Los Angeles Building Department from this approval.

**The approval is subjected to the following conditions:**

The Covert Injection Adhesive (CIA) Epoxy Anchors consist of a two component adhesive, known as, CIA-Gel 7000, and CIA Fluid package in equal volume side by side cartridges. The epoxy is dispensed through a motionless mixer nozzle, which attaches to the cartridges. The CIA-Gel 7000 is used to anchor all-threaded rod in concrete (normal weight and light weight), grouted concrete masonry units and reinforced masonry. The CIA-Gel 7000 may also be used to anchor deformed reinforcing bar in concrete. The CIA Fluid is used to anchor all-threaded rod in concrete.

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The CIA-EA Epoxy Acrylate Anchors consist of two-component adhesive packaged in unequal-volume, side-by-side, plastic cartridges. The cartridges are sealed individually with D-shaped plugs and/or a screw-on cap which may be used after partial use of contents. The epoxy acrylate is mixed when dispersed through a spiral motionless mixing nozzle attached to the cartridge.

The CIA-EA may be used to anchor a threaded steel rod, with a nut and washer, or deformed steel reinforcing bars.

The values shown in this report shall not be used in repair, retrofit and new construction of tilt-up wall or masonry wall anchorage (in tension) for the connection with the horizontal wood diaphragm.

A 25% reduction in all allowable loads specified in the research report shall be taken in hold-down devices as required by 91.2315.5.6 of the 2008 Los Angeles Building

## **I. CIA Epoxy Anchor in Grouted Concrete Masonry Units**

1. Special inspection is required by a registered reinforced concrete, or reinforced masonry deputy inspector with controlled activity in drilled in anchors as required by Section 91.1701 of the 2002 Los Angeles City Building Code.
2. Allowable loads for anchors are specified in table 4.
3. The tabulated allowable loads must be reduced by a load factor, when the anchors are installed in locations where the concrete temperature may exceed 105°F. Figure 1 is a thermal correction graph to reduce the allowable loads with increase in temperature.
4. The epoxy shall be allowed to harden before bolt-up. See table 3 for bolt-up time.
5. The minimum compressive strength,  $f'_m$  shall be 3000 psi.
6. The anchors shall be limited to one anchor per grout cell. Where the spacing is less than 12 anchor diameters the allowable load shall be proportionally reduced to 50% at 6 anchor diameters.
7. The anchors shall have a minimum edge distance of 12 inches.
8. The epoxy type anchors shall not be installed into or used to support any fire-resistive construction.

## **II. CIA Epoxy Anchor in Un-reinforced Brick**

1. Special inspection is required by a registered reinforced concrete, steel, or reinforced masonry deputy inspector with controlled activity in drilled in anchors as required by Section 91.1701 of the 2002 Los Angeles City Building Code.
2. Allowable loads for anchors are specified in table 5.

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3. The tabulated allowable loads must be reduced by a load factor, when the anchors are installed in locations where the concrete temperature may exceed 105°F. Figure 1 is a thermal correction graph to reduce the allowable loads with increase in temperature.
4. The epoxy shall be allowed to harden before bolt-up. See table 3 for bolt-up time.
5. The minimum compressive strength,  $f'_m$  shall be 1500 psi.
6. Where spacing is less than the minimum specified in Table 5 the allowable load shall be reduced proportionally to 50% for half the specified spacing.
7. The anchors shall have a minimum edge distance of 12 inches.
8. The epoxy type anchors shall not be installed into or used to support any fire-resistive construction.

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## **DISCUSSION**

The report is in compliance with 2008 Los Angeles Building Code.

The approval is based on tests in accordance with ICC-ES Acceptance Criteria for Adhesive Anchors in Masonry Elements (AC58), dated June 2006 and for Un-reinforced Masonry Anchors (AC60), dated April 2005.

This general approval will remain effective provided the Evaluation Report is maintained valid and unrevised with the issuing organization. Any revision to the report must be submitted to this Department for review with appropriate fee to continue the approval of the revised report.

Addressee to whom this Research Report is issued is responsible for providing copies of it, complete with any attachments indicated, to architects, engineers and builders using items approved herein in design or construction which must be approved by Department of Building and Safety Engineers and Inspectors.

This general approval of an equivalent alternate to the Code is only valid where an engineer and/or inspector of this Department has determined that all conditions of this Approval have been met in the project in which it is to be used.

The status of the referenced Report No.ESR-1702, dated March 1, 2008, which is currently beyond its reexamination date are still valid. The validity of the Report was verified with ICC.

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TV: tvo  
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R02/01/10  
5A1/1911/1912/2.1.4 ACI 530

Attachment: ICC ES Report No. ESR-1702 (6 Pages)