

An ACI Standard

# Multi-Component Epoxy Adhesive for Bonding to Concrete—Specification

Reported by ACI Committee 548

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## Multi-Component Epoxy Adhesive for Bonding to Concrete—Specification

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Reported by ACI Committee 548

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*This Specification describes bonding fresh concrete, hardened concrete, steel, and other materials as covered in Section 1.3 to hardened concrete with a multi-component epoxy adhesive as defined for this purpose in ASTM C881/C881M. Included are controls for adhesive labeling; storage; handling; surface evaluation and preparation; mixing and application; and inspection, safety, quality control, and testing.*

**Keywords:** adhesive; bond; construction; epoxy; epoxy resin; fresh concrete; quality control; repair; safety; surface.

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## SECTION 1—GENERAL REQUIREMENTS

### 1.1—Scope

**1.1.1** This Specification covers the use of multi-component epoxy adhesives, meeting the requirements of **ASTM C881/C881M** for bonding to hardened concrete as specified in **2.1.1** and **3.1.1**.

**1.1.2** This Specification is incorporated by Contract Documents and provides requirements for the Contractor.

**1.1.3** This Specification governs for construction within its scope, except project-specific Contract Documents govern if there is a conflict.

**1.1.4** This Specification governs if there is a conflict with reference material and testing standards.

**1.1.5** Contractor is permitted to submit written alternatives to any provision in this Specification for consideration.

**1.1.6** Do not use this Specification in conjunction with ACI 301 or ACI 350.5 unless Contract Documents state that this Specification governs for Work covered by **1.1.1**.

**1.1.7** Ignore provisions of this Specification that are not applicable to the Work.

**1.1.8** Values in this Specification are stated in SI units. A companion specification in inch-pound units is also available.

**1.1.9** The Notes to Specifier are not part of this Specification.

### 1.2—Interpretation

**1.2.1** Unless otherwise explicitly stated, this Specification shall be interpreted using the following principles.

**1.2.1.1** Interpret this Specification consistent with the plain meaning of the words and terms used.

**1.2.1.2** Definitions provided in this Specification govern over the definitions of the same or similar words or terms found elsewhere.

**1.2.1.3** Whenever possible, interpret this Specification so that its provisions are in harmony and do not conflict.

**1.2.1.4** Headings are part of this Specification and are intended to identify the scope of the provisions or sections that follow. If there is a difference in meaning or implication between the text of a provision and a heading, the meaning in the text governs.

**1.2.1.5** Where a provision of this Specification involves two or more items, conditions, requirements, or events connected by the conjunctions “and” or “or,” interpret the conjunction as follows:

“and” indicates that all the connected items, conditions, requirements, or events apply.

“or” indicates that the connected items, conditions, requirements, or events apply singularly.

**1.2.1.6** The use of the verbs “may” or “will” indicates that the Specification provision is for information to the Contractor.

**1.2.1.7** The phrase “as indicated in Contract Documents” means the Specifier included the provision requirements in the Contract Documents.

**1.2.1.8** The phrase “unless otherwise specified” means the Specifier may have included an alternative to the default requirement in the Contract Documents.

**1.2.1.9** The phrase “if specified” means the Specifier may have included a requirement in the Contract Documents for which there is no default requirement in this Specification.

**1.2.1.10** Unless otherwise stated, the SI system of units is applicable to combined standards referenced in this Specification.

### 1.3—Definitions

The following definitions shall govern in this Specification.

**accepted**—determined by the Architect/Engineer to be in compliance with Contract Documents.

**Architect/Engineer**—the architect, engineer, architectural firm, or engineering firm issuing Contract Documents or administering the Work under Contract Documents, or both.

**bond interface**—the layer of adhesive that connects two adjacent materials.

**continuous metering and mixing**—the process of providing accurately measured quantities of ingredients into a blending chamber and, as a result, generating a stream of properly blended product at the exit.

**Contract Documents**—set of documents that form the basis of a contractual relationship between an Owner and constructor or design-builder. These documents are defined by the contractual agreement, and contain contract forms, contraction conditions, specifications, drawings, addenda, and contract changes.

**Contractor**—the person, firm, or entity under contract for construction of Work.

**drawings**—graphic representations that detail requirements for Work and may include written notes.

**epoxy**—a thermosetting polymer that is the reaction product of epoxy resin and a hardener.

**fresh concrete**—concrete that possesses enough of its original workability so that it can be placed and consolidated by the intended methods.

**Owner**—the corporation, association, partnership, individual, public body, or authority for whom Work is constructed.

**specifications**—the written document that details requirements for the Work.

**submit**—provide to Architect/Engineer for review.

**submittal**—document or material provided to Architect/Engineer for review and acceptance.

**Work**—the entire construction or separately identifiable parts thereof required to be furnished under Contract Documents.