

An ACI Standard

Specification for Crack Repair by Epoxy Injection

Reported by ACI Committee 548

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Specification for Crack Repair by Epoxy Injection

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American Concrete Institute
30300 Country Club Drive
Farmington Hills, MI 48331
Phone: +1.248.848.3700
Fax: +1.248.848.3701

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Mahmoud M. Reda Taha, Chair

Ashraf I. Ahmed
Mohammad A. Alhassan
Jacques A. Bertrand
Constantin Bodea
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Michael S. S...

Donald P. Tragianese
Wafeek S. Wahby
David White

CONSULTING MEMBERS

Milton D. Anderson
Lu Anqi
Craig A. Ballinger
John J. Bartholomew
Shashi P. Bhatnagar
Jerry D. Byrne
Zhi-Yuan Chen

Lech Czarnecki
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George Horeczko
David P. Hu
Bert Paul Kriekemans
Deon Kruger

William Lee
Roy D. Madeley
Harvey L. Marsh Jr.
Peter Mendis
Peter J. Moss
Yoshihiko Ohama
Kelly M. Page

Hamid Saadatmanesh
Donald A. Schmidt
Meyer Steinberg
Harold H. Weber Jr.

This Specification gives requirements for repairing cracks in concrete by injection of two-component epoxy-resin adhesives.

Keywords: adhesive; crack; epoxy; repair injection; sealer.

CONTENTS

PART 1—GENERAL, p. 2

- 1.1—Scope, p. 2
- 1.2—Interpretation, p. 2
- 1.3—Definitions, p. 2
- 1.4—Reference standards, p. 3
- 1.5—Submittals, p. 3
- 1.6—Delivery, storage, and handling, p. 3
- 1.7—Quality assurance and quality control acceptance of work, p. 3

PART 2—PRODUCTS, p. 5

- 2.1—Surface seal, p. 5
- 2.2—Injection adhesives, p. 5

PART 3—EXECUTION, p. 5

- 3.1—Evaluation and preparation, p. 5

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Reference to this document shall not be made in contract documents. If items found in this document are desired by the Architect/Engineer to be a part of the contract documents, they shall be restated in mandatory language for incorporation by the Architect/Engineer.

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- 3.2—Test injection, p. 5
- 3.3—Injection, p. 5
- 3.4—Cleanup, p. 6
- 3.5—Safety, p. 6

NOTES TO SPECIFIER (NONMANDATORY), p. 6

- General notes, p. 6
- Foreword to Checklists, p. 6

PART 1—GENERAL

1.1—Scope

1.1.1 This Specification covers the repair of cracks in concrete by pressure-injecting epoxy into cracks that intersect at least one accessible surface of the concrete member. It does not cover the repair of delaminations where the intersection of the cracked concrete with the surface of the concrete member is not accessible nor can be made accessible.

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

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

1.1.7 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 consistently 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 When 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.

1.3—Definitions

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 plane formed by an adhesive between two adjacent materials.

continuous metering and mixing—the process in which two adhesive components are continuously metered into and discharged from a mixing chamber.

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

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

crack face—the exposed intersection of a crack and the surface of the concrete member.

crack repair—the work performed to permit the transfer of stress across the crack and provide a barrier to prevent the infiltration of aggressive solutions.

injection adhesive—the material that is injected into a crack for the purpose of repair.

injection port—a device or passageway in the surface seal through which the injection adhesive is introduced into a crack.

permitted—accepted by or acceptable to Architect/Engineer, usually pertaining to a request by Contractor, or when specified in Contract Documents.

specification—the written document that details requirements for the Work.

specifier—person or entity preparing specifications for a material, product, system, or service.

submit—provide to Architect/Engineer for review.

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

surface seal—the material that is applied to the crack face to contain the injection adhesive during the injection process.

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