

An ACI Standard

Specification for Shotcrete

Reported by ACI Committee 506

ACI 506.2-13(18)



American Concrete Institute
Always advancing

This is a preview. [Click here to purchase the full publication.](#)



Specification for Shotcrete

Copyright by the American Concrete Institute, Farmington Hills, MI. All rights reserved. This material may not be reproduced or copied, in whole or part, in any printed, mechanical, electronic, film, or other distribution and storage media, without the written consent of ACI.

The technical committees responsible for ACI committee reports and standards strive to avoid ambiguities, omissions, and errors in these documents. In spite of these efforts, the users of ACI documents occasionally find information or requirements that may be subject to more than one interpretation or may be incomplete or incorrect. Users who have suggestions for the improvement of ACI documents are requested to contact ACI via the errata website at <http://concrete.org/Publications/DocumentErrata.aspx>. Proper use of this document includes periodically checking for errata for the most up-to-date revisions.

ACI committee documents are intended for the use of individuals who are competent to evaluate the significance and limitations of its content and recommendations and who will accept responsibility for the application of the material it contains. Individuals who use this publication in any way assume all risk and accept total responsibility for the application and use of this information.

All information in this publication is provided “as is” without warranty of any kind, either express or implied, including but not limited to, the implied warranties of merchantability, fitness for a particular purpose or non-infringement.

ACI and its members disclaim liability for damages of any kind, including any special, indirect, incidental, or consequential damages, including without limitation, lost revenues or lost profits, which may result from the use of this publication.

It is the responsibility of the user of this document to establish health and safety practices appropriate to the specific circumstances involved with its use. ACI does not make any representations with regard to health and safety issues and the use of this document. The user must determine the applicability of all regulatory limitations before applying the document and must comply with all applicable laws and regulations, including but not limited to, United States Occupational Safety and Health Administration (OSHA) health and safety standards.

Participation by governmental representatives in the work of the American Concrete Institute and in the development of Institute standards does not constitute governmental endorsement of ACI or the standards that it develops.

Order information: ACI documents are available in print, by download, through electronic subscription, or reprint and may be obtained by contacting ACI.

Most ACI standards and committee reports are gathered together in the annually revised the ACI Collection of Concrete Codes, Specifications, and Practices.

American Concrete Institute
38800 Country Club Drive
Farmington Hills, MI 48331
Phone: +1.248.848.3700
Fax: +1.248.848.3701

www.concrete.org

Specification for Shotcrete

An ACI Standard

Reported by ACI Committee 506

Lawrence J. Totten, Chair

Marc Jolin*, Secretary

Jon B. Ardahl*
Lars Balck, Jr.
Michael Ballou
Nemkumar Banthia
Chris D. Breeds
Wern-Ping Nick Chen
Scott R. Cumming*
Jean-Francis Dufour
Jill E. Glassgold
Charles S. Hanskat*
Warren L. Harrison

Thomas Hennings
Kristian Loevlie
Mark R. Lukkarila
Gregory S. McKinnon
Jeffrey L. Novak
H. Celik Ozyildirim
Harvey W. Parker
Ryan E. Poole
John H. Pye
James A. Ragland*
Venkataswamy Ramakrishnan

Raymond C. Schallom, III
Raymond J. Schutz
Philip T. Seabrook†
W. L. Snow, Sr.*
Peter C. Tatnall*
Curtis White
Peter T. Yen
George Yoggy
Lihe Zhang
Christopher M. Zynda

Subcommittee member
Donald M. McPhee

Consulting members
Merlyn Isaak
Richard A. Kaden
Roman Malinowski
Dudley R. Morgan

*Task group members who produced this specification.

†Task group Chair who produced this specification.

This specification contains the construction requirements for the application of shotcrete. Both wet- and dry-mixture shotcrete are addressed, as well as fiber-reinforced shotcrete. The minimum standard for materials, properties, testing, and application are covered.

The materials, processes, quality control measures, and inspections described in this specification should be tested, monitored, or performed as applicable only by individuals holding the appropriate ACI certifications or equivalent.

Keywords: dry-mixture shotcrete; fiber-reinforced shotcrete; nozzleman; qualification; quality control; quality assurance; shooting; wet-mixture shotcrete.

CONTENTS

(mandatory portion follows)

PART 1—GENERAL, p. 2

- 1.1—Scope, p. 2
- 1.2—Definitions, p. 2

ACI Committee Reports, Guides, and Commentaries are intended for guidance in planning, designing, executing, and inspecting construction. This document is intended for the use of individuals who are competent to evaluate the significance and limitations of its content and recommendations and who will accept responsibility for the application of the material it contains. The American Concrete Institute disclaims any and all responsibility for the stated principles. The Institute shall not be liable for any loss or damage arising therefrom.

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.

- 1.3—Referenced standards, p. 2
- 1.4—Submittals, p. 3
- 1.5—Preconstruction testing by Contractor, p. 4
- 1.6—Testing during construction, p. 4
- 1.7—Acceptance of Work, p. 5

PART 2—PRODUCTS, p. 5

- 2.1—Materials, p. 5
- 2.2—Packaged shotcrete materials, p. 6
- 2.3—Fiber-reinforced shotcrete, p. 6
- 2.4—Shotcrete properties, p. 6
- 2.5—Proportioning, p. 6
- 2.6—Batching, mixing, and delivery, p. 6

PART 3—EXECUTION, p. 6

- 3.1—Preparation of surface to receive shotcrete, p. 6
 - 3.2—Joints, p. 6
 - 3.3—Alignment control, p. 7
 - 3.4—Application, p. 7
 - 3.5—Finish, p. 8
 - 3.6—Curing, p. 8
 - 3.7—Protection, p. 8
 - 3.8—Tolerances, p. 8
 - 3.9—Repair of shotcrete, p. 8
- (nonmandatory portion follows), p. 8*

ACI 506.2-13 supersedes ACI 506.2-95 and was adopted on October 29, 2013 and published in January 2014.

Copyright © 2014, American Concrete Institute

All rights reserved including rights of reproduction and use in any form or by any means, including the making of copies by any photo process, or by electronic or mechanical device, printed, written, or oral, or recording for sound or visual reproduction or for use in any knowledge or retrieval system or device, unless permitted in writing by the copyright proprietors.