

An ACI Standard

External Curing of Cast-in-Place Concrete— Specification

Reported by ACI Committee 308

ACI SPEC-308.1-23



American Concrete Institute
Always advancing



External Curing of Cast-in-Place Concrete—Specification

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. Despite 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.asp>. Proper use of this document includes periodically checking for errata for the most up-to-date revision.

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 and 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 regarding 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.

ACI documents are written via a consensus-based process. The characteristics of ACI technical committee operations include:

- (a) Open committee membership
- (b) Balance/lack of dominance
- (c) Coordination and harmonization of information
- (d) Transparency of committee activities to public
- (e) Consideration of views and objections
- (f) Resolution through consensus process

The technical committee documents of the American Concrete Institute represent the consensus of the committee and ACI. Technical committee members are individuals who volunteer their services to ACI and specific technical committees.

American Concrete Institute
8800 Country Club Drive
Farmington Hills, MI 48331
Phone: +1.248.848.3700
Fax: +1.248.848.3701

External Curing of Cast-in-Place Concrete—Specification

An ACI Standard

Reported by ACI Committee 308

Lawrence Homer Taber, Chair

Erik Holck*, Secretary

Oscar R. Antommattei
Jason Barnes
Daron R. Brown
Joshua M. Carroll
Jonathan E. Dongell
Michael Faubel

John D. Fauth
Dale Fisher
Sidney Freedman
David E. Hoyt
Cecil L. Jones
Frank A. Kozeliski

Ronald L. Kozikowski Jr.
Mauricio Lopez Casanova*
Darryl Manuel
Stephen F. McDonald
Aimee Pergalsky
David M. Suckor Jr.

Lawrence L. Sutter
Richard E. Van Horn
Ben Wiese
John B. Wojakowski

Consulting Members

Ralph C. Bruno
James N. Cornell

Ben E. Edwards
Jerome H. Ford

Paul Douglas Pooton
James A. Lee

W. Calvin McCall
William S. Phelan*

*Deceased.

Note: Special acknowledgment is given to Erik Holck for his contribution to this document.

This Reference Specification provides requirements for curing of concrete that the Architect/Engineer can apply to any construction project by citing it in the Project Specification. Checklists are provided to assist the Architect/Engineer in selecting the provisions of this Reference Specification as needed, designating or specifying customized project requirements.

This Specification provides requirements for various methods for the external curing of concrete. These methods are not necessarily equal in effectiveness, cost, effect on project schedule, or impact on other aspects of the project. Provisions governing initial, final, and termination of curing are included.

This Specification addresses external curing methods applied after placement of cast-in-place concrete. While internal curing (use of saturated lightweight aggregate or other materials to provide supplemental water) and accelerated curing (heat curing) shall also use external curing methods, not all aspects of internal and accelerated curing are included.

Keywords: cold weather concreting; concrete construction; curing; curing forms and sheets; hot weather concreting; insulation; membrane curing compounds; moist curing; moisture retention; sealers; water curing; water retention.

CONTENTS

PART 1—GENERAL, p. 2

- 1.1—Scope, p. 2
- 1.2—Interpretation, p. 2
- 1.3—Definitions, p. 2
- 1.4—Referenced standards, p. 3
- 1.5—Submittals, p. 3
- 1.6—Quality assurance and quality control, p. 3

PART 2—PRODUCTS, p. 3

- 2.1—Materials, p. 3

PART 3—EXECUTION, p. 3

- 3.1—General, p. 3
- 3.2—Initial curing, p. 4
- 3.3—Final curing, p. 4
- 3.4—Termination of curing, p. 4

ACI SPEC-308.1-23 supersedes ACI 308.1-11 and was approved by the ACI Standards Board for publication March 2023 and published June 2023.

Copyright © 2023, 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 permission in writing is obtained from the copyright proprietors.