IN-LB	Inch-Pound Units
SI	International System of Units

An ACI Standard

Concrete Slabs that Receive Moisture-Sensitive Flooring Materials—Guide

Reported by ACI Committee 302

ACI PRC-302.2-22

American Concrete Institute
Always advancing

First Printing
February 2023
ISBN: 978-1-64195-206-4

Concrete Slabs that Receive Moisture-Sensitive Flooring Materials—Guide

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.

ACI codes, specifications, and practices are made available in the ACI Collection of Concrete Codes, Specifications, and Practices. The online subscription to the ACI Collection is always updated, and includes current and historical versions of ACI's codes and specifications (in both inch-pound and SI units) plus new titles as they are published. The ACI Collection is also available as an eight-volume set of books and a USB drive.

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

www.concrete.org

ACI PRC-302.2-22

Concrete Slabs that Receive Moisture-Sensitive Flooring Materials—Guide

Reported by ACI Committee 302

Joseph F. Neuber Jr., Chair

Patrick J. Harrison, Vice Chair

Russell E. Neudeck, Secretary

Dennis C. Ahal
Kenneth L. Beaudoin
Bryan M. Birdwell
Peter A. Craig*
Allen Face
C. Rick Felder
Edward B. Finkel
Barry E. Foreman

Greg K. Fricks
Terry J. Fricks
Jerry A. Holland
Philip S. Kopf
Milan R. Lipensky
Steve R. Lloyd Sr.
Kevin A. MacDonald
Arthur W. McKinney†

Donald M. McPhee
Scott C. Metzger
Jeffrey S. Miller
Scott L. Niemitalo
Nigel K. Parkes
William S. Phelan
Tim H. Robinson
John W. Rohrer

Paul A. Rouis, III
Domenick Thomas Ruttura
Bruce A. Suprenant
Scott M. Tarr‡
Donald G. W. Ytterberg

*Subcommittee Chair.
†Deceased.
‡Subcommittee Secretary.

Consulting Members

Carl Bimel†
Michael A. Clark

William C. Panarese†
Brian J. Pashina

Boyd C. Ringo†

This guide contains materials, design, and construction recommendations for concrete slabs-on-ground and suspended slabs that are to receive moisture-sensitive flooring materials. These flooring materials include sheet rubber, epoxy coatings, vinyl composition tile, sheet vinyl, carpet, athletic flooring, laminates, and hardwood.

Keywords: admixtures; cracking; curing; curling; drying; mixture proportioning; moisture movement; moisture test; relative humidity; slabs-on-ground; specifications; vapor retarder.

CONTENTS

ACI PRC-302.2-22 supersedes ACI 302.2R-06 and was adopted and published in February 2023.

CHAPTER 1—INTRODUCTION AND SCOPE

1.1—Introduction

Moisture-related problems with floor covering materials are a serious and costly construction issue. Such problems include blistering, delamination, adhesive degradation, adhesive bleed, and mold growth. Claims for the correction of these problems may call for full or partial replacement of the flooring system. Claims may also be made for construction delays, lost revenue, or health issues related to indoor air quality. It is currently up to architects, engineers, flooring installers, flooring and adhesive manufacturers, concrete contractors, and concrete producers to solve these problems.

1.2—Scope

Chapters 1 through 8 provide an understanding of concrete moisture behavior and drying and show how recommended construction practices can contribute to successful performance of floor covering materials. This background provides a basis for the recommendations in Chapter 9 to improve the performance of floor covering materials in contact with concrete moisture and alkalinity.

Because this guide is specific to floor moisture problems and solutions, refer to ACI 302.1R and ACI 360R for general information. These two documents contain guidance on floor design and construction that is needed to achieve successful floor covering performance.

The objective of this document is to provide information and guidance to help reduce the potential for moisture-related flooring problems to occur with both slabs-on-ground and suspended slabs. It provides basic information on the