

**ACI 440.3R-12**

**Guide Test Methods for Fiber-  
Reinforced Polymer (FRP)  
Composites for Reinforcing or  
Strengthening Concrete and  
Masonry Structures**

Reported by ACI Committee 440



**American Concrete Institute®**

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



American Concrete Institute®  
*Advancing concrete knowledge*

First Printing  
August 2012

## **Guide Test Methods for Fiber-Reinforced Polymer (FRP) Composites for Reinforcing or Strengthening Concrete and Masonry Structures**

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 [www.concrete.org/committees/errata.asp](http://www.concrete.org/committees/errata.asp). 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, on CD-ROM, 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 ACI Manual of Concrete Practice (MCP).

**American Concrete Institute**  
**38800 Country Club Drive**  
**Farmington Hills, MI 48331**  
**U.S.A.**  
**Phone: 248-848-3700**  
**Fax: 248-848-3701**

[www.concrete.org](http://www.concrete.org)

ISBN 078-9-87021-776-7

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

# Guide Test Methods for Fiber-Reinforced Polymer (FRP) Composites for Reinforcing or Strengthening Concrete and Masonry Structures

Reported by ACI Committee 440

Carol K. Shield, Chair

Tarek Alkhrdaji  
Charles E. Bakis\*  
Lawrence C. Bank  
Abdeldjelil Belarbi  
Brahim Benmokrane  
Luke A. Bisby  
Gregg J. Blaszak  
Hakim Bouadi  
Timothy E. Bradberry  
Gordon L. Brown Jr.  
Vicki L. Brown  
John P. Busel  
Raafat El-Hacha  
Garth J. Fallis  
Amir Z. Fam  
Nabil F. Grace  
Mark F. Green  
Zareh B. Gregorian  
Doug D. Gremel  
Shawn P. Gross  
H. R. Trey Hamilton III  
Issam E. Harik  
Kent A. Harries  
Mark P. Henderson  
Bohdan N. Horeczko  
Michael W. Lee  
Maria Lopez de Murphy  
Ibrahim M. Mahfouz  
Amir Mirmiran  
John J. Myers  
Antonio Nanni  
Ayman M. Okeil  
Carlos E. Ospina  
Renato Parretti  
Max L. Porter

William J. Gold, Secretary

Andrea Prota  
Hayder A. Rasheed  
Sami H. Rizkalla  
Rajan Sen  
Rudolf Seracino  
Pedro F. Silva  
Khaled A. Soudki  
Samuel A. Steere III  
Jay Thomas  
Houssam A. Toutanji  
J. Gustavo Tumialan  
Milan Vatovec  
David White  
Sarah E. Witt

\*Chair of authoring subcommittee.

*Consulting members*

P. N. Balaguru  
Craig A. Ballinger  
Harald G. F. Budelmann  
C. J. Burgoyne  
Elliot P. Douglas  
Rami M. Elhassan  
David M. Gale  
Russell Gentry  
Arie Gerritse  
Srinivasa L. Iyer  
Koichi Kishitani  
Howard S. Kliger  
Kyuichi Maruyama  
Antoine E. Naaman  
Mark A. Postma  
Hajime Okamura  
Ferdinand S. Rostasy  
Mohsen Shahawy  
Surendra P. Shah  
Yasuhisa Sonobe  
Minoru Sugita  
Luc R. Taerwe  
Ralejs Tepfers  
Taketo Uomoto  
Paul Zia

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.

ACI 440.3R-12 supersedes ACI 440.3R-04 and was adopted and published August 2012.

Copyright © 2012, 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.