

**Specification for Type MMS  
(Methyl Methacrylate Slurry)  
Polymer Overlays  
for Bridge and Parking Garage Decks**

An ACI Standard

Reported by ACI Committee 548



**American Concrete Institute®**



American Concrete Institute®  
*Advancing concrete knowledge*

First Printing  
September 2010

## **Specification for Type MMS (Methyl Methacrylate Slurry) Polymer Overlays for Bridge and Parking Garage Decks**

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. Proper use of this document includes periodically checking for errata at **[www.concrete.org/committees/errata.asp](http://www.concrete.org/committees/errata.asp)** 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.

**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)**

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

# Specification for Type MMS (Methyl Methacrylate Slurry) Polymer Overlays for Bridge and Parking Garage Decks

An ACI Standard

Reported by ACI Committee 548

Michael S. Stenko  
Chair

Herschel H. Allen III  
Milton D. Anderson  
John J. Bartholomew  
Constantin Bodea  
James T. Dikeou  
Garth J. Fallis

David W. Fowler  
Robert W. Gaul  
Albert O. Kaeding  
John R. Milliron  
Brad Nemunaitis  
Richard C. Prusinski

Mahmoud M. Reda Taha  
John R. Robinson  
Donald A. Schmidt  
Qizhong Sheng  
Joe Solomon  
Michael M. Sprinkel

Donald P. Tragianese  
Cumaraswamy Vipulanandan  
Wafeek S. Wahby  
Harold H. Weber, Jr.  
David White  
David P. Whitney

*This Specification covers methyl methacrylate slurry (MMS) overlays for bridge and parking garage decks. Type MMS polymer overlay incorporates methyl methacrylate-based primer, binder, and top coat with selected filler and aggregate to produce a flexible, skid-resistant, and water-resistant slurry overlay. The overlay is used for both new construction and rehabilitation. The overlay is placed by applying the polymer slurry system to the surface and broadcasting aggregate. This Specification includes requirements for chemical components, aggregates, storage and handling, surface preparation, surface profile, mixing, placement, finishing, and quality control.*

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

**Keywords:** aggregate; bridge decks; methyl methacrylate; mortar; overlays; parking garage decks; polymer; premixed; resin; slurry.

## CONTENTS

### Section 1—General, p. 2

- 1.1—Scope
- 1.2—Definitions
- 1.3—Reference standards
- 1.4—Submittals
- 1.5—Project conditions
- 1.6—Labeling, storage, and handling of materials
- 1.7—Safety

### Section 2—Products, p. 3

- 2.1—Methyl methacrylate-based primer
- 2.2—Methyl methacrylate-based binder
- 2.3—Filler

- 2.4—Methyl methacrylate-based top coat
- 2.5—Aggregate
- 2.6—Polymer overlay slurry

### Section 3—Execution, p. 4

- 3.1—Procedure qualification
- 3.2—Surface preparation
- 3.3—Mixing methyl methacrylate-based primer, binder-filler slurry, and top coat
- 3.4—Overlay application
- 3.5—Curing
- 3.6—Excess aggregate removal
- 3.7—Joints
- 3.8—Opening to traffic

### Notes to Specifier, p. 5

General notes

### Foreword to checklists, p. 6

### Mandatory Requirements Checklist, p. 6

### Submittals Checklist, p. 6

ACI 548.10M-10 became effective July 7, 2010 and was published August 2010.  
Copyright © 2010, 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.