AASHTO-AGC-ARTBA Joint Committee

Subcommittee on New Highway Materials

Task Force 34 Report

Guide Specifications for Polymer Concrete Bridge Deck Overlays

October 1995

GUIDE SPECIFICATIONS FOR POLYMER CONCRETE BRIDGE DECK OVERLAYS

AASHTO-AGC-ARTBA

TASK FORCE 34

OCTOBER 1995

INTRODUCTION

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Polymer Concrete Bridge Deck Overlays

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CHAPTER 1—INTRODUCTION

1.0—Definition of Terms

Monomer as used herein is a low-viscosity, liquid organic material from which a polymer is made.

Polymers are hard, glassy solids commonly called plastics.

Polymerization is a chemical process by which a monomer is converted into a polymer.

Inhibitors are materials that are added to monomers to prevent polymerization from occurring during shipping and storage.

Initiators are chemical materials that are required to start the polymerization process.

Promoters are chemicals used to accelerate the polymerization process.

1.1—Abbreviations

AASHTO. American Association of State Highway and Transportation Officials.

ACI. American Concrete Institute.

AGC. Association of General Contractors.

ARTBA. American Road and Transportation Builders Association.

ASTM. American Society for Testing and Materials.

MSDS. Material Safety Data Sheet.

VTM. Virginia Test Method.

1.2—Polymers in Concrete

Polymers have been used in concrete as construction materials since the 1950s. The use of polymer concrete materials for highway and bridge deck applications has been increasing in the United States since the 1970s.[1-4] As the traffic volume grows, the benefits of the quick repairs possible with polymer concrete materials will likely lead to continued growth of the polymer concrete industry.[5-7]