
Standard Specification for Corrosion-Resistant Coated Dowel Bars

AASHTO Designation: M 254-06 (2023)

Technically Revised: 2006

Reviewed but Not Updated: 2023

Technical Subcommittee: 4f, Metals



American Association of State Highway and Transportation Officials
555 12th Street NW, Suite 1000
Washington, D.C. 20004

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1. SCOPE

- 1.1. This specification covers the materials, manufacture, and installation of coated dowel bars to be used where corrosion-resistant performance is essential and may be used in lieu of stainless or other approved noncorrosive metals. The dowel shall consist of a steel core covered by an organic coating.
- 1.2. *The coated dowels shall be one of the two following types:*
Type A—The coating material develops sufficiently low-bond strength with concrete that a bond breaker is not required.
Type B—The coating material develops bond strength with concrete such that a bond breaker is required. The type of bond breaker used shall be as recommended by the coating manufacturer.
- 1.3. The values stated in SI units are to be regarded as the standard.
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2. REFERENCED DOCUMENTS

- 2.1. *AASHTO Standards:*
< M 255M/M 255, Steel Bars, Carbon, Hot-Wrought, Special Quality, Mechanical Properties
< T 253, Coated Dowel Bars
- 2.2. *ASTM Standard:*
< D7091, Standard Practice for Nondestructive Measurement of Dry Film Thickness of Nonmagnetic Coatings Applied to Ferrous Metals and Nonmagnetic, Nonconductive Coatings Applied to Non-Ferrous Metals
- 2.3. *Other Reference:*
< FHWA-RD-74-18, “Nonmetallic Coating for Concrete Reinforcing Bars,” 1974
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3. GENERAL REQUIREMENTS

- 3.1. The coated dowels shall resist corrosion and degradation caused by roadway deicing materials and normal highway debris.
- 3.2. The coating shall develop low-bond strengths with portland cement concrete without a bond breaker, if Type A, or with the proper bond breaker, if Type B.
- 3.3. The coating shall resist wear due to abrasion resulting from pavement expansion and contraction.