

Georgia Department of Transportation
Office of Materials and Research

Standard Operating Procedure (SOP) 26
Inspection of Epoxy Coated Reinforcement Steel

I. General

This Standard Operating Procedure presents an outline of the responsibilities of fusion bonded coaters intending to provide epoxy coated reinforcement steel and dowel bars for use on GDOT construction projects and the duties of GDOT personnel assigned to perform the required inspections.

It is the function of the Inspection Services Branch of the [Office of Materials and Research](#) to certify that epoxy coated reinforcement steel and dowel bars delivered to GDOT construction projects meet Specification requirements. The [Office of Materials and Research](#) publishes a list of all fusion bonded coaters which have qualified under the program in accordance with this Standard Operating Procedure. This list is identified as [Qualified Products List \(QPL\) 43, "Fusion Bonded Coaters"](#).

II. Qualifications

Any materials coated and fabricated for the Department must conform to the requirements in Section 514, "Epoxy Coated Steel Reinforcement" of the Specifications. All reinforcement steel and epoxy powders must be from a qualified source approved by the [Office of Materials and Research](#). Approved reinforcement steel rolling mills are listed on [Qualified Products List \(QPL\) 61, "Reinforcement Steel Rolling Mills"](#). Approved epoxy powders are listed on [Qualified Products List \(QPL\) 38, "Epoxy Powders for Coating Steel Reinforcing Bars"](#). Before a new epoxy powder can be added to the Qualified Products List it must be submitted to the [Office of Materials and Research](#) for evaluation. Testing will be in accordance with AASHTO M284 Annex A1, Prequalification of Organic Coatings for Steel Reinforcing Bars.

III. Responsibilities

Fabricators of coated bars must also comply with Standard Operating Procedure (SOP)16, "Inspection of Reinforcement Steel". It is anticipated that some fabricators may coat their bars while other fabricators may not. The coater will be responsible for furnishing Certification of Compliance reports to the Department on each lot of epoxy powder used on GDOT construction projects. The fabricator/coater will be responsible for furnishing DOT Form 166 A to the Inspection Services Branch of the [Office of Materials and Research](#), which will

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give information such as heat numbers, contractor, and project number. This report shall be received within five (5) days of shipment. The fabricator will at all times fabricate and furnish epoxy-coated reinforcement bar that meet Georgia Department of Transportation Specifications. The fabricator/coater shall handle, bundle, and transport coated bar so that the bar will be protected against abrasion and sag. Special attention will be given to equipment for the purpose of loading and unloading to prevent damage to the coating. Also, the fabricator will be responsible for patching areas that were not covered such as ends that were sheared off. The coater shall have a quality assurance program approved by the Department and at all times shall operate in a professional manner as to product the best quality and workmanship in the production of coated bar.

An in-line holiday detector shall be used in accordance with the manufacturer's instructions to check the coating for holidays. The detector shall be a 67.5 volt in-line detector.

The coating is required to meet AASHTO M284 Specification with the following changes: modify the bending requirement to 180° around mandrel diameters equal to AASHTO Bridge Specifications.

Coater must furnish the Inspection Services Branch of the [Office of Materials and Research](#) a notarized yearly guarantee that all epoxy-coated reinforcement steel furnished to GDOT construction projects will meet the governing Specifications. A "Yearly Certification and Guarantee" is attached for your completion and submittal to the Department. The guarantee shall be sworn to for the coater by a person having legal authority to bind the company to contract.

IV. Shipping, Handling, and Storage

Bars will be transported from the fabricators shop by means that meet approval of the Department. Sufficient spacing, padding, and handling shall be used to prevent damage to the bars and coating during transportation. Chains or steel cables shall not be used during loading or unloading. Epoxy coated reinforcement bars shall be stored off the ground and in a manner to prevent damage to coating and with good safety practices. Handling of coated bar shall conform to the requirements of Section 514, "Epoxy Coated Steel Reinforcement" of the Specifications. The fabricator shall furnish a patch compound to repair small areas that need touch-up. Patch compound for touch up and repair shall be furnished by the epoxy manufacturer and shall be compatible with the coating material. Patching compound will be sent with every load and be delivered at the time as the coated bar.

Georgene M. Geary, P.E.
State Materials and Research Engineer

Glenn W. Durrence, P.E.
Director of Construction

Annual Guarantee

This is to guarantee that all _____ (Type of Material) furnished to State of Georgia projects by (Company Name and Location) _____ during the next twelve (12) months will meet the appropriate governing requirements of the Georgia Department of Department of Transportation Specifications. I further warrant that material furnished to State of Georgia projects will be replaced without cost to the purchaser and

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State of Georgia when found not in conformity with any of the specified requirements. I accept full responsibility for determining the governing Specifications and details which apply to each other.

I further warrant that all steel products shipped to Georgia Department of Transportation projects are made from domestic steel and iron and that no foreign billets are used directly in the manufacture of these products.

I _____ (Typed Name) do hereby affirm that as _____ (Official Title) I am legally responsible to bind said organization to the above warranty and certification.

Signed _____

Date _____

Notary Public _____

Date _____

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DOT-166-A

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
OFFICE OF MATERIALS AND RESEARCH**

"EPOXY COATED"

REINFORCEMENT STEEL SHIPMENT REPORT

Contract No. _____

Project _____

County _____

Date Shipped _____

Rolled By: _____ Location _____

Coated By: _____ Location _____

Fabricated By: _____ Location _____

Contractor _____ Grade _____

Bridge Number	Heat Number	Bar Size	Pounds
Invoice Number	Epoxy Coating Lot No.	Total Weight	

Note: Attach certified mill reports for the above heat numbers.

I certify that the reinforcement steel covered by this report was fabricated to comply with the Georgia Department of Transportation Standard Drawings, Standard Specifications and/or plans.

Signed _____

_____ Title

Subscribed and sworn to before me, this _____

day of _____, 20_____

_____ Notary Public