



Epoxy – General

Revision and Approval

Revision	Date	Nature of Changes	Approved By
0	03-30-2023	Original Issue	Richard Foley

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Background

This process establishes Structure Construction (SC) roles and responsibilities for the review and authorization of epoxy furnished for structure work, including submittals, quality assurance, materials, and construction.

Structure work applicable for use of epoxy includes the use of epoxy adhesive for bonding fresh concrete to existing concrete, and the use of epoxy in concrete not covered in Bridge Construction Memo ([BCM](#)) [60-3.05C](#), *Existing Structures – Structure Rehabilitation – Repairing Structures – Epoxy Crack Injection*.

For use of epoxy for dowel bonding, refer to [BCM 51-1.03E](#), *Concrete Structures – General – Construction – Miscellaneous Construction*.

Prior to reviewing this BCM, it is essential to review the [Contract Specifications](#) (CS), Section 95-1, *Epoxy – General*, that this BCM is based on as identified in the title block above. The information in the CS typically will not be repeated in the text of this BCM.

Process Inputs

1. Submittals required by the CS for work using epoxy, including:
 - a. Epoxy manufacturer product data including safety data sheet (SDS)
 - b. Certificate of compliance

Procedure

1. All work associated with this process is charged as [Project Direct – Construction](#).
2. Inspection of field work for this process is:
 - a. [Continuous](#) for checking surface preparation, mixing epoxy, and applying epoxy.
 - b. [Intermittent](#) for all other activities.
3. Before construction begins:
 - a. Review contract documents. Determine the type of epoxy application and the quantity of epoxy needed, as applicable.
 - b. Review [Attachment 1](#), *Information and Instructions for Epoxy Use*, for guidance on how the epoxy should be mixed and applied.
 - c. Review the *Construction Manual*, Chapter 4, [Section 4-95](#), *Construction Details – Epoxy*, and the *Concrete Technology Manual*, [Chapter 6](#), *Structure Concrete Repair and Rehabilitation*, which include tasks that must be performed and information regarding epoxies.
 - d. Review and authorize the proposed epoxy product as follows:
 - i. Request that the Contractor provides manufacturer product data for review. Contact [Materials Engineering and Testing Services Representative \(METS Rep\)](#) for assistance as needed.
 - ii. Review and verify the certificate of compliance.
4. During construction:
 - a. Verify that epoxy product delivered to project site matches the submitted and authorized material documentation.
 - b. In accordance with the *Construction Manual*, Chapter 6, *Sampling and Testing*, [Table 6-2.3](#), *Materials Accepted by Certificate of Compliance (4 of 12)*, collect certificate of compliance and complete [Form CEM-4102](#), *Material Inspected and Released on the Job*.
 - c. Review material SDS and manufacturer's instructions. Verify that surface preparation and epoxy application are both performed in accordance with the contract documents and manufacturer's instructions.
 - i. Refer to [Attachment 1](#), *Information and Instructions for Epoxy Use*, for additional guidance.
 - d. Reject finished product if poor workmanship is observed (visual inspection), or if bonding is deemed inadequate (informal test utilizing a sounding hammer or chain).

- e. Document all inspection and construction, and quality assurance activities, pertinent to the BCM, in the daily reports per [BCM C-7](#), *Daily and Weekly Reports*.
5. File all correspondence, materials acceptance documentation, and daily reports in the appropriate category in the project records as specified in the *Construction Manual*, Chapter 5, [Section 5-102](#), *Contract Administration – Project Records and Reports – Organization of Project Documents*.

Process Outputs

1. Authorized epoxy submittal (including certificate of compliance)
2. Form CEM-4102, *Material Inspected and Released on the Job*
3. Daily reports

Attachments

1. [Attachment 1](#), *Information and Instructions for Epoxy Use*