

**PREQUALIFICATION PROCEDURES AND ACCEPTANCE CRITERIA FOR FUSION BONDED EPOXY POWDERS FOR COATING REINFORCING STEEL BARS**

The Corrosion Branch currently has the lead role in reviewing the applicable ASTM prequalification test results for fusion-bonded epoxy powders, and the results of production samples of epoxy powder coatings for reinforcement used for prequalification.

**New Products**

Prequalification testing and results must be performed by an independent testing lab.

For new products prequalification results and samples must include the following:

1. Certified copy of all prequalification test results required per the applicable ASTM. Results must be from a certified Independent Testing Laboratory.
2. 4 ounce sample of the proposed epoxy powder shipped in a sealed, airtight container.
3. Digital infrared spectra scan of the proposed epoxy powder.
4. Two 30-inch coated No. 5 or No. 6 reinforcement bars.
5. One sample of No. 5 or No. 6 bar blasted in accordance with applicable ASTM and uncoated for use in calibration of electronic thickness gages.

If an epoxy powder meets the prequalification test criteria in the applicable ASTM specification and the prequalification samples meet evaluation by Caltrans (inspection of powder and coated reinforcement samples for specification compliance), the powder is "authorized", placed on the authorized list of fusion bonded epoxy for coating reinforcing steel and may be applied to reinforcement (in accordance with the ASTM Designation) and submitted for use on Caltrans projects.

**Reauthorization**

Documentation required to maintain authorization on the AML include the following:

- A signed memo to the Department, stating/specifying modifications/revisions (if any) were made to the product since authorized by the Department. Revisions include but are not limited to material specifications, and manufacturing processes.
- Manufacturer must submit a digital infrared Absorbance scan of the powder product from a certified Independent Laboratory to the Chemical Testing Branch.

Product samples must be submitted to the following address for testing within sixty days of the expiration date, otherwise they will be removed from the list.

Products placed on the list will remain on the list for a period of five years.

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**The Corrosion Branch** is responsible for reviewing all prequalification test data performed by the Independent Testing Lab to ensure that a particular coating meets the specified ASTM test criteria. In addition, we review the results of physical and chemical tests conducted by the Structural Materials Testing Branch and the Chemical Testing Branch. We also respond back to the powder manufacturers and rebar coaters to notify them of their product's status.

Corrosion Testing Lab  
California Department of Transportation  
5900 Folsom Blvd.  
Sacramento, CA 95819

**The Structural Materials Testing Branch** performs the required physical testing (bend tests, coating thickness and holiday tests) of rebar samples submitted for prequalification and jobsite acceptance tests. These tests check the characteristics (bonding, flexibility, and coating coverage) of the coating rebar. Samples should be submitted to the following address:

Structural Materials Testing Lab  
California Department of Transportation  
5900 Folsom Blvd.  
Sacramento, CA 95819

**The Chemical Testing Branch** performs the required testing (infrared spectra testing and magnetic particle testing) of epoxy powder samples for both prequalification and jobsite acceptance tests. These tests ensure that the powder product used to coat rebar for Caltrans projects has not been altered from the original submittal and is free of undesirable metal particles. Samples should be submitted to the following address:

Chemistry Laboratory  
California Department of Transportation  
5900 Folsom Blvd. Rm 286  
Sacramento, CA 95819

*For more information, you may contact the Structural Materials Testing Branch at [SMTL@dot.ca.gov](mailto:SMTL@dot.ca.gov).*