



# Construction Policy Bulletin

## CPB 12-4 Field-Sampling Procedures for Traffic Paint, Thermoplastic, and Glass Beads

References: *Construction Manual* Section 4-84, "Traffic Stripes and Pavement Markings"  
Section 6-203, "Materials Manufactured to Caltrans-Specified Formulation"  
California Test 406 Method of Test for Field-Sampling of Pavement Marking Materials, September 2011

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### Background

Caltrans typically tests and approves pavement-marking materials (traffic paint, thermoplastic, glass beads) before they are shipped by the manufacturer to the job site. The Office of Materials Engineering and Testing Services (METS) tests batch samples of these materials, received directly from the manufacturer, and notifies the manufacturer by fax and email whether they have approved the individual batches. When shipping the material to the job site, manufacturers will include this notification with their shipment as evidence that METS has pretested and approved the batch.

Pretested and approved batches of pavement-marking material may also be sampled at the job site for quality assurance. If field sampling is not done properly, a non-representative sample of the pavement-marking material may result. Non-representative samples from the job site have an increased possibility of failing quality assurance tests even though METS previously tested and approved the batch.

### Existing Procedure

The striping inspector collects samples of pavement-marking materials at the job site. The samples are typically scooped from a bulk container or collected directly from the applicator gun or feed line on the striping equipment. Usually, only a single one-quart sample is taken at the jobsite. Batch numbers for these samples are copied from a container belonging to the batch or from the paperwork provided by the contractor. Because no written procedure exists, the sampling method is left up to the striping inspector taking the sample.

### New Procedure

California Test 406 (CT 406), "Method of Test for Field-Sampling of Pavement Marking Materials," describes procedures for obtaining samples of pavement-marking materials from a factory-sealed bag, bulk container, or stripe-application equipment. Circumstances at the job site often dictate where to

gather the sample. Field-striping inspectors must follow the procedures in CT 406 (attached) to ensure that representative samples are taken of pavement-marking materials. Please review the "Precautions" and "Health and Safety" sections of CT 406 immediately before proceeding with sampling of pavement-marking materials.

Field sampling must be initiated by the striping inspector or the resident engineer under the following conditions:

- The material is more than 1 year old (based on the date of manufacture).
- Product tampering or adulteration is suspected.
- Adequate proof that the product has been pretested and approved is not provided (e.g., missing batch approval paperwork or other product/batch number discrepancies on containers or paperwork).

Where large quantities of pavement-marking materials are being applied, random quality assurance sampling of these materials is advisable.

Samples of pavement-marking materials in unopened factory-sealed bags are preferred. Factory-sealed bags are labeled with the manufacturer's name and batch number, which makes identification easier. When sampling glass beads and thermoplastic, collect the following sample quantity to ensure a representative sample:

- One unopened 50-lb. (25 kg.) bag of glass beads of the same manufacturer and lot number being used in the striping operation.
- One unopened 50-lb. (25 kg.) bag of thermoplastic of the same manufacturer and lot number being used in the striping operation.

For traffic paint, bulk containers can be sampled only when the material is first homogeneously mixed using appropriately sized mixing equipment. For bulk containers of paint obtain a one quart sample. Multiple samples are necessary when sampling paint directly from the application equipment to ensure that the product is homogeneously mixed. Each grab sample must be approximately 1 quart and submit grab samples separately.

Label samples of pavement-marking materials according to where and how they were gathered at the job site. Include pertinent information on form TL-0101, "Sample Identification Card," and promptly send samples to METS for testing.

Web-based training should be available beginning in the winter of 2012 for sampling procedures for traffic paint, thermoplastic, and glass beads based on California Test 406.

If you have questions or comments concerning this bulletin, please contact Mitch Gipson, METS, at [mitch\\_gipson@dot.ca.gov](mailto:mitch_gipson@dot.ca.gov) or (916) 227-7919 or, Ericson Ugbo, Division of Construction, at [ericson\\_ugbo@dot.ca.gov](mailto:ericson_ugbo@dot.ca.gov) or (916) 227-7013.

Attachment: California Test 406, "Method of Test for Field-Sampling of Pavement Marking Materials"