

Tex-300-D, Sampling Hydraulic Cement

Overview

Effective dates: August 1999 — December 2006

This method covers the procedure for sampling hydraulic cement. This method is a modification of ASTM C 183, to satisfy the requirements of governing specifications or conditions in the CST/M&P Laboratory.

Units of Measurement

The values given in parentheses (if provided) are not standard and may not be exact mathematical conversions. Use each system of units separately. Combining values from the two systems may result in nonconformance with the standard.

Section 1

Sampling Information

All sampling shall be performed by an authorized representative of TxDOT.

Samples of hydraulic cement are taken for these purposes:

- ◆ Certification Samples
 - For prequalification, nine samples are taken initially over a two-day period.
 - Two weeks later, three additional samples are taken (provided a lot from a different production is available).
 - A sample shall be taken after each 45,360 kg (100,000 lb.) has been manufactured or loaded.
- ◆ Quality Monitoring Samples
 - The quality monitoring program requires a minimum sampling frequency of once a month and a maximum sampling frequency of once a week from certified source producers.
- ◆ Job Samples
 - Samples should be taken from any questionable quality material on projects.
 - For non-certified sources, the sampling frequency for quality tests should be according to the guide schedule of sampling and testing in the *Construction Contract Administration Manual*.
 - Job samples should be submitted to CST/M&P for testing.

Section 2

Apparatus

The following apparatus is required:

- ◆ implements for securing sample such as a scoop, etc.
- ◆ friction lid 4 L (1 gal.) bucket, moisture proof and free from contamination.

Section 3

Materials

The following materials are necessary:

- ◆ cement – enough to loosely fill the sample bucket
- ◆ Bill of Lading and Mill Certification statements accompanying shipments should be obtained to verify that the material is the type specified for the job
- ◆ Form 202, "Identification of Material Samples" for information on cement producer, type and project
- ◆ Form 517 envelope.

Section 4 Sampling Procedures

The cement shall be sampled by one of the following procedures with care exercised to assure that the sample is representative of the cement being used.

Hydraulic Cement

NOTE: Individual samples should not be combined into a composite sample under any conditions.

Sampling Hydraulic Cement	
Step	Action
1	Take samples from bulk truck, railcar, sack, or bin at ready-mix plant. NOTE: Refer to the 'Sampling from Bulk Truck, Railcar, Sack, or Bin' table to complete this step.
2	Complete three copies of Form 202, "Identification of Material Samples" identifying material showing all information pertaining to the sample, including type, actual producer, and mill or terminal location.
3	Seal: <ul style="list-style-type: none"> ◆ one copy of Form 202 inside the bucket with the sample. ◆ original Form 202 in Form 517 (tag envelope) and attach securely to the outside of sample bucket, then submit to: TxDOT; Construction Division/Materials & Pavements; Cedar Park Campus, Bldg. 51; 9500 Lake Creek Parkway, Austin, TX 78717. NOTE: The third copy is for the sampler's record file.

The following details the steps in completing Step 1 of the 'Sampling Hydraulic Cement' table.

Sampling from Bulk Truck, Railcar, Sack, or Bin	
When taking samples...	Then...
from top hatch of truck or railcar	<ul style="list-style-type: none"> ◆ brush aside approximately 50 mm (2 in.) of top layer ◆ take sample from as deep in the load as possible.
from sacks	take one sample from one sack representing the lot or shipment.
from valve in transfer pipe between truck and silo storage	<i>ONLY</i> after the flow of cement is well established.
at the batch plant, when production is intermittent or at the beginning of batch operations	samples can be taken from cement bin, weigh box, point of discharge into ready mix trucks, or other accessible points.