DMS-4630

Silica Fume

Effective Date: July 2023

1. DESCRIPTION

This Specification governs the requirements and test methods for silica fume—a very fine pozzolanic material, composed mostly of amorphous silica.

2. UNITS OF MEASUREMENTS

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.

3. MATERIAL PRODUCER LIST

The Materials and Tests Division (MTD) maintains the Material Producer List (MPL) of all materials conforming to the requirements of this Specification. Materials appearing on the MPL, entitled "Silica Fume," requires sampling and testing before use as per the guide schedule, unless deemed necessary by the Project Engineer or MTD.

4. BIDDERS' AND SUPPLIERS' REQUIREMENTS

Silica fume must be qualified in accordance with the requirements of this Specification before it is allowed on Department projects.

Use of qualified product does not relieve the Contractor of the responsibility to provide product that meets this Specification. The Department may inspect or test material at any time and reject any material that does not meet the specifications.

5. QUALIFICATION PROCEDURE

5.1. **Qualification Request.** Submit a request for evaluation under DMS-4630 to DMS_Prequal@txdot.gov.

Include the following information in the request:

- company name;
- physical and mailing addresses; and
- contact person, phone number, and email address.

5.2. **Qualification Sample.** Submit one grab sample of at least 1 gal. in size to the Texas Department of Transportation, Materials and Tests Division, Laboratory Building, 6230 E. Stassney Ln., Austin, TX 78744.

Include the following with the sample:

- corresponding mill certificates and
- current safety data sheet (SDS) that complies with OSHA Hazard Communication Standard 29 CFR 1910.1200.

Submit all materials for qualification at no cost to the Department.

5.3. **Sampling and Testing.** Sampling and testing will be in accordance with ASTM C1240.

5.4. **Evaluation.** MTD will notify prospective bidders and suppliers after completion of material evaluation.

5.4.1. **Qualification.** The Department will accept materials meeting the requirements of this Specification for use on Department projects.

Report changes in the composition or in the manufacturing process of any material to MTD. Significant changes reported by the producer, as determined by MTD, may require a re-evaluation of performance. The Department reserves the right to conduct whatever tests it deems necessary to identify a qualified material and determine if there is a change in the composition, manufacturing process, or quality that may affect its durability or performance. In case of variance, the Department's tests will govern.

5.4.2. **Failure.** Producers not qualified under this Specification may not furnish materials for use on Department projects.

Producers failing to qualify may submit a request for re-evaluation after 12 mo. have elapsed from the date of the original request. MTD may modify this time limit at its discretion. In the request for re-evaluation, document the cause of the issue and corrective action taken.

The Department normally bears the costs of sampling and testing; however, the producer will bear the costs associated with materials failing to conform to the requirements of this Specification and any re-evaluation testing. MTD will assess this cost at the time of testing and amounts due will be billed to the producer.

5.5. **Periodic Evaluation.** The Department reserves the right to conduct random sampling and testing of qualified materials to verify performance and Specification compliance and to perform random audits of documentation. Department representatives may sample material from the plant, terminal, transportation containers, or the concrete plant.

6. MATERIAL REQUIREMENTS

Silica fume must meet the requirements of ASTM C1240.

7. ARCHIVED VERSIONS

Archived versions are available.