METHODS OF SAMPLING AND TESTING
MT 536-16
CHEMICAL ANALYSIS OF SILICA FUME
(Montana Method)

1 Scope

1.1 This method describes the procedures to be used for determining chemical analytes in silica fume as recommended by AASHTO M 307 Standard Specification for Silica Fume Used in Cementitious Mixtures.

1.2 Spectroscopic Determination of Silicon Dioxide in Silica Fume – MT 533 Chemical Analysis of Fly Ash and Pozzolans

1.3 Moisture Content of Silica Fume – ASTM C311 sections 11 and 12

1.4 Loss on Ignition (LOI) of Silica Fume – ASTM C311 sections 13 and 14

1.5 This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

2 Referenced Documents

ASTM
C114 Standard Test Methods for Chemical Analysis of Hydraulic Cement
C311 Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland-Cement Concrete

AASHTO
M 307 Standard Specification for Silica Fume Used in Cementitious Mixtures

MT Materials Manual
MT 533 Chemical Analysis of Fly Ash and Pozzolans
MT 607 Procedure for Reducing Field Samples to Testing Size

3 Significance and Use

3.1 This procedure is primarily used to provide quality assurance for the silica fume submittals for suppliers on the MDT Qualified Product List as well as provide analytical information for design applications using silica fume.

4 Report

4.1 Data Reporting and Retention for Silica Fume will be reported as shown below:

Analyte	Report As	Significance
Si	SiO_2	XX.XX
Moisture	Moisture	X.XX
LOI	LOI	X.XX

5 Validation

5.1 For validation data and quality control information consult ASTM C114 and ensure all instruments meet its conditions.

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