

1403 - SILICA FUME

SECTION 1403

SILICA FUME

1403.1 DESCRIPTION

This specification covers silica fume, or microsilica, which is suitable for use as an admixture for portland cement concrete. Silica fume is a by-product resulting from the reduction of high purity quartz with coal in electric arc furnaces in the manufacture of silicon and ferrosilicon alloys.

1403.2 REQUIREMENTS

Provide material which complies with ASTM C 1240.

1403.3 TEST METHODS

As specified in ASTM C 1240.

1403.4 PREQUALIFICATION

a. Sources of silica fume must be prequalified. Submit certified analyses of the quality control tests completed during the 6-month period immediately before the prequalification request. Certified analyses are defined as the range of test results of the properties specified above on representative materials tested by a laboratory which is regularly inspected and certified by the Cement and Concrete Reference Laboratory (CCRL). Include mill certifications for the raw material.

b. Forward the certified analysis to the Chief of Materials and Research. If the material satisfies all requirements, the source will be placed on a prequalified list.

c. Verification samples will be taken by each District, at the rate of one per year, for each silica fume producer supplying material to that District's projects.

d. Semi-annual results of the producers quality control testing, as defined above, are required to be forwarded to the Bureau of Materials and Research to maintain status on the prequalified list. Sources will remain on the prequalified list, so long as verification samples and semi-annual test results complies with all requirements, and indicate acceptable quality control.

1403.5 BASIS OF ACCEPTANCE

a. Prequalification as required by **subsection 1403.4** of this specification.

b. Receipt and approval of a Type C certification as specified in **DIVISION 2600**.