

SECTION 1009 -- SILICA FUME

1009.01 -- Description

Silica fume is very fine pozzolanic material composed mostly of amorphous silica produced by electric arc furnaces as a by-product of the production of elemental silicon or ferro-silicon alloys.

1009.02 -- Material Characteristics

1. Silica fume shall conform to the requirements of ASTM C 1240, including the optional chemical and physical requirements, except that the minimum SiO₂ shall be 90 percent by mass.
2. Silica fume in slurry form shall not be allowed.

1009.03 -- Procedures

1. The Contractor shall provide adequate protection for the silica fume against dampness.
2. Silica fume shall be protected from temperatures in excess of 30°C.
3. Silica fume shall be protected from exposure to direct sunlight.
4. Each shipment of silica fume sent to a project or ready mix plant shall be accompanied with a certificate of compliance executed by the manufacturer. The certificate must include the following information:
 - a. The name of the manufacturer.
 - b. The location of the manufacturer.
 - c. The batch or lot number.
 - d. The date of manufacture.
 - e. The mass of the shipment.
 - f. The NDR specifications that the product is in compliance with.
5. No silica fume which has become caked or lumpy shall be used.
6. Silica fume which has been spilled shall not be used.

1009.04 -- Acceptance Requirements

1. Silica fume approved for use is on the NDR Approved Products List. The suppliers, in addition to providing a manufacturer's certification of compliance for each shipment, must submit certification annually to the NDR Materials and Tests Division stating that their product meets NDR specifications.

2. Silica fume that arrives without proper certification shall be sampled, tested, and approved by the NDR Materials and Tests Division before use.