

OFFICE OF STATE AID ROAD CONSTRUCTION  
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

DATE: May 10, 2006

**SUBJECT: Miscellaneous Materials:**

Section S-714-MISCELLANEOUS MATERIALS; of the MISSISSIPPI STANDARD SPECIFICATIONS FOR STATE AID ROAD AND BRIDGE CONSTRUCTION 2004 EDITION is hereby amended as follows:

Delete Subsection 714.07 on page 7-92 and substitute the following:

**901-S-714.07--Other Cementitious Materials:**

**901-S-714.07.1--Metakaolin:**

**901-S-714.07.1.1--Metakaolin--General:** Metakaolin shall only be used to bring the cementitious materials in Portland cement concrete and cement for soil stabilization into compliance with the requirements for cementitious materials exposed to soluble sulfate conditions. The approval of each metakaolin source shall be on a case by case basis as determined by the MDOT State Materials Engineer. Source approval will be based on, but not limited to, review of the proposed source's quality control program, production history, certified test reports, certification of shipment from the supplier, and job control sampling and testing requirements.

The Contractor shall provide suitable means for storing and protecting the metakaolin against dampness and contamination Metakaolin which has become partially set, caked, or contains lumps shall not be used.

The MDOT State Materials Engineer shall be notified in writing of the nature, amount and identity of any processing, or other additions made to the metakaolin during production.

Metakaolin from different sources shall not be mixed or used alternately in any one class of construction or structure without written permission from the Engineer. In addition to these requirements, metakaolin shall meet the following specific requirements.

**901-S-714.07.1.2--Specific Requirements:** Metakaolin shall meet the requirements of AASHTO Designation: M 295 Class N with the following modifications:

1. The sum of  $\text{SiO}_2 + \text{Al}_2\text{O}_3 + \text{Fe}_2\text{O}_3$  Shall be at least 85%. The Material Safety Data Sheet shall indicate the amount of crystalline silica, as measure by National Institute of Occupation Safety and Health (NIOSH) 7500 method, after removal of the mica interference, is less than 1.0%.
2. The loss on ignition shall be less than 3.0%.
3. The available alkalies, as equivalent  $\text{Na}_2\text{O}$ , shall not exceed 1.0%.
4. The amount of material retained on the No. 325 Mesh sieve shall not exceed 1.0%.
5. The strength activity index at seven (7) days shall be at least 85%.