

Cement Kiln Dust (CKD)

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Cement Kiln dust is a derivative of the clinker production process. CKD is captured during the clinker production phase in attached baghouse. Until recently the material has been either reintroduced in the kiln during clinker production or disposed of in an approved landfill area. Due to new Federal EPA requirements and the availability of approved landfill areas. CKD is now being considered as a replacement of the limestone as an inorganic material in the cement.

Alkali content in the cement is one of the factors considered when introducing inorganic material into the final product. CKD has alkali content and must be measured in order to meet AASHTO M85 Federal Standards in the production of cement. In order for individual State acceptance of the addition a verifiable process must be established to measure the overall content of alkali in the final product.

Each Cement Mill has it's own level of Alkali content and is based on the materials used to generate the heat in the clinker production process. This will require each mill to measure and report the final alkali content in the cement to ensure AASHTO requirements for acceptable levels are maintained.

The Georgia Department of Transportation has recently approved the addition of CKD in the final grinding process as a direct addition to the final cement. This material can be added at varying rates in conjunction to the limestone. The overall rate of addition of CKD under the M85 specification will be within 5% of the total inorganic material allowed. Some Plants will divide the limestone and CKD at different level depending on the CKD generated and the availability of limestone, but combined total of not more than the allowed 5% established in M85.

