

**INFLUENCE OF FLY ASH ON SETTING AND HARDENING
CHARACTERISTICS OF CONCRETE**

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Reference: CBU-1994-07

ABSTRACTS

Hydration reactions between cement and water result in solidification of the mixture. The degree of solidification depends upon the rate of hydration reactions. Initial setting of concrete refers to the beginning of solidification for a given concrete mixture. Up to initial setting, the concrete can be remixed/agitated without significant long-term adverse effects. Increased setting of the mixture leads to increased stiffness and hardness of the material formed due to the continuing hydration process. Final setting of concrete refers to the beginning phase of the ability of the concrete to support stress. Concrete setting is influenced by a number of variables such as source, properties, type, and amount of cement, and fly ash and other cementitious/pozzolonic powder additives; water-to-cementitious materials ratio; temperature of the mixture; soluble alkalies; liquid admixtures; etc.