

GEOPOLYMER CONCRETE

**EFFECT OF RICE HUSK ASH TO COMPRESSION AND ITS
MICROSTRUCTURE PROPERTIES**

SITI ASMAHANI SAAD
MARIANA MOHAMED OSMAN
MUHD FADHIL NURUDDIN



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GEPOLYMER CONCRETE

EFFECT OF RICE HUSK ASH TO COMPRESSION AND ITS MICROSTRUCTURE PROPERTIES

This research focuses on determination of cement-free geopolymer concrete capacity as an alternative to Ordinary Portland Cement concrete (OPC) for in-situ casting and the effect of utilizing waste material in polymeric concrete. pulverized fuel ash (PFA) is used as the main constituent and MIRHA as replacement by 0%, 3%, 5% and 7%. Sodium hydroxide and sodium silicate solution are used as alkali activators of silica (Si) and aluminium (Al) in main binders while sugar is added to delay the setting time of the polymeric concrete. The polymeric concrete samples are exposed to three different curing regimes namely hot gunny sack curing, ambient temperature curing and external exposure curing. Compressive strength test is carried out in 3, 7, 28 and 56 days to identify the strength of the polymeric concrete. Scanning Electron Microscopy (SEM) analysis is done to ascertain the microstructure properties of the produced polymeric concrete.

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