

# Comparative Study on Rapid Chloride Migration Tests of Supplementary Cements

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## **Abstract**

*This study investigates chloride durability of concrete prepared with Portland cement and binary additions consisting pozzolanic (Fly ash) and latent hydraulic (Ground Granulated Blastfurnace Slag - GGBS) mixes and also with limestone powder. Specimens were subjected to electro-chemical rapid chloride migration tests of two different kinds, namely, Potential Difference (PD) and Multi-Regime (MR) tests. Both the tests measure chloride durability in terms of  $D$ , the Coefficient of Chloride Diffusion. The PD and MR test results show that in the early ages, 100% Portland cement concrete performed well against chloride diffusion. However, fly ash and GGBS concrete showed higher resistance against chloride migration at later stage. At equal strength grade, w/c ratio and age, GGBS concrete had the highest resistance against chloride among other cement types.*

**Keywords:** Rapid chloride test, Supplementary cements, Chloride durability.