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### Self-Curing of Concrete by Polyethylene Glycol and Epoxy Resin

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**Abstract :** Curing of concrete means maintaining optimum moisture content in concrete during its early stages in order to attain the desired characteristic properties. Proper curing is not possible in many cases due to human negligence, inaccessibility of structures and in areas where fluoride presence is more in water. The self-curing method reduces the water evaporation and helps the concrete to attain its strength and durability. Therefore water remains in the concrete when compared to conventional concrete. Water resources are getting valuable nowadays  $1\text{m}^3$  of concrete needs  $3\text{m}^3$  of water especially for the curing process. The benefit of self-curing admixture is very significant in water scarce areas where water is insufficient. The admixture is a water soluble polymer. The heat of hydration is slowed down by the epoxy resin. In this study, the mechanical properties of polymer added (2 percentage by the weight of cement) with the normal conventional concrete.

**Index Terms :** self-curing concrete; water retention; Hydration; polyethylene Glycol; Epoxy resin.

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