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REVIEW ON MECHANICAL PROPERTIES OF CONCRETE WITH REPLACING CURING WATER BY SELF CURING COMPOUNDS

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ABSTRACT: The curing of concrete requires large amount of water. Self-curing concrete is one type of concrete, which cure itself by retaining water (moisture content) in it. A body of literature on the different self-curing compounds is used for curing purpose without externally curing the concrete is currently available, but a systematic review is lacking. Therefore, this paper reviewed the published literature on the use of different self-curing compounds in concrete and past work analysis on self-curing concrete. Various chemicals were used to attain this curing. It was found out that various chemical admixtures such as Poly Ethylene Glycol (PEG), Sodium Lignosulphonate, Polyvinyl alcohol (PVA), Super Absorbent Polymer (SAP) and naturally available and commonly used materials like Light Weight Aggregates, Wood powder and Light Expanded Clay Aggregate were used to fabricate self-curing concrete. This paper summarizes the collected literatures on replacement of curing water with self-curing compounds and how these affects the fresh properties like workability and hardened properties like Compressive strength, Split tensile strength and durability of concrete.

Keywords: *Self Curing Compound, PEG, Super Absorbent Polymer, Polyvinyl Alcohol, Light weight aggregates*