IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 5, Issue 4, April 2025
Impact Factor: 7.67

Self-Curing Concrete: Enhancing Durability and Strength Without External Curing

[1]Prof. Supriya Shinde, [2]Hardik Patil, [3]Athar Patel, [4]Shreesant Bhawar,
[5]Kushal Jadhav, [6]Shreyas Jadhav
Lecturer, Department of Civil Engineering[1]
Students, Department of Civil Engineering[2-6]
Bharati Vidyapeeth Institute of Technology, Navi Mumbai

Abstract: *This paper reviews the utilization of self-curing agent sourced from traditional curing methods for concrete production. The use of self-curing agent has been adopted in numerous construction projects across Europe, America, Russia, and Asia. This research, however, indicates that self-curing agents derived from concrete specimens can produce high-quality concreter. Concrete waste from demolished structures is collected, and coarse aggregates in varying percentages are used to produce fresh concrete. In this study, for the 28th day cube compressive strength using OPC was evaluated for 0%, 50%, and 100% RCA and compared with nominal concrete. The study summarizes the results of workability, water absorption, dry density, and compressive strength of HPC made with RA as reported in previous studies. The paper also discusses the microstructure and durability performance of concrete. This study demonstrates that the strength of concrete is influenced by the addition of RCA.*

Keywords: Self Curing Concrete, Self Curing, Green concrete, New concrete

DOI: 10.48175/568