IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.53
Volume 4, Issue 2, October 2024

# Experimental Study on Partial Replacement of Aggregate by using Plastic Waste

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**Abstract:** *Safe disposal of waste plastic is a serious environmental concern which needs to be mitigate. Being a non-biodegradable material, it does not decay over time and even if dumped in landfills, finds its way back in the environment through air and water erosion, can choke the drains and drainage channels, can be eaten by unsuspecting grazing animals causing them illness and death, can contaminate the construction fill, etc. The use of plastic shall be refused as much as possible. This paper investigates the effect to fusing waste plastic materials on the concrete. Waste plastic used in this study were collected from home which are almost available in our homes. The plastic can be used as filler material in concrete as well as it can be used to improve the mechanical properties of concrete. Concrete is a composite material which comprises Cement, Coarse Aggregate, Fine Aggregate, Water and Admixtures. In this project, M25 grade of concrete with W/C 0.46 is adopted and the percentage of waste plastic added as 0%, 2%, 4%, 6%, 8% and 10% to study the strength of concrete. High compressive strength was found with 8% of waste plastic added in the concrete.*

**Keywords:** Waste plastic, Concrete, OPC, Aggregate


DOI: 10.48175/568