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

Brick Manufacturing by using Waste Plastic and Sand

Om A Kalushe, Om G Wasu, Arnav S Aslkar, Prem S Gulhane
Rohit M Pise, Pratiksha R Shambalkar
DRGITR, Polytechnic Amravati, India

Abstract: *The exponential rise in the production of plastic and the consequential surge in plastic waste have led the scientists and researchers look out for innovative and sustainable means to reuse/recycle the plastic waste in order to reduce its negative impact on environment. Construction material, converting waste plastic into fuel, household goods, fabric and clothing are some of the sectors where waste plastic is emerging as a viable option. Out of these, construction material modified with plastic waste has garnered lot of attention. Modification of construction material with plastic waste serves a dual purpose. It reduces the amount of plastic waste going to landfills or litter and secondly lessens the use of mined construction materials, thereby mitigating the negative impact of construction industry on environment. This paper summarizes the developments with regard to the use of plastic waste as a constituent of construction material. Inclusion of plastic waste as a binder, aggregate, fine aggregate, modifier or substitute of cement and sand in the manufacturing of bricks, tiles, concrete and roads has been comprehensively reviewed. Also, the influence of addition of plastic waste on strength properties, water absorption, durability, etc. has been thoroughly discussed. The research studies considered for this review have been categorized based on whether they dealt with the use of plastic waste for bricks and tiles or in concrete for road construction.*

Keywords: Waste Plastic, Conventional bricks, Compression Test, water absorption Test, Efflorescence

DOI: 10.48175/568