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An Overview on the Properties of Self-Healing Bacterial Concrete

İlker Bekir Topçu[1], Burak Işıkdağ[2]

[1]Eskişehir Osmangazi University, Department of Civil Engineering, Eskişehir, TURKEY
ilkerbt@ogu.edu.tr

[2]Anadolu University, Porsuk Vocational School, Eskişehir, TURKEY
bisikdag@anadolu.edu.tr

ABSTRACT

Concrete is the most common building material which tends to crack. Thus, it is important to repair cracks in concrete structures. To this aim, the scientists have been studying on bacterial concrete to improve self-healing of cracks using bacteria, and which conditions are required for the growth of the bacteria in concrete. For this reason, Bacillus was used in concrete production which is a mixture of bacterial spores with water-active nutrients, and it was observed that the calcite sedimentation leads to self-healing of cracks in concrete. In this study, the results of the literature about the properties of self-healing bacterial concrete were evaluated to lead new studies in Turkey.

Keywords: Self-healing concrete, Micro-cracks, Bacteria, Humidity, Bacillus pasteurii.