

## Abstract

In Algeria, locally available natural pozzolan of volcanic origin material has the potential for use in environmental friendly concrete as a partial cement replacement. This paper studies the effect of replacement level of pozzolan concrete in sulphated environment. The natural pozzolan has a marked influence on the properties of the concrete. When it is coupled to a water reducing superplasticizer by a correct adjustment of the composition, it greatly improves the concrete properties. The analysis of experimental results on pozzolan concrete at 5% content and fineness of 9565 cm<sup>2</sup>/g exposed in sulphated environment, show that it positively contributes to the improvement of its mechanical, physical and physico-chemical characteristics. Trough this research work, parameters such as compressive strength development, chloride permeability, water absorption and sulphates resistance are studied