

Effect of mechanical activation on kaolin-based geopolymers

Abstract

Raw materials kaolin was subjected to mechanical modification; the effect of the mechanical activation of kaolin on the compressive strength and morphological properties of the geopolymers has been studied. Mechanical activation of the kaolin results in particle size reduction and morphology changes with increase in reactivity. Mechanical activated kaolin has overall higher strength gain compared to raw kaolin. Wider particle size distribution and some spherical particles produced, promote a higher packaging density in the sample resulting in higher strength obtained. Mechanically activation of kaolin can be considered as an alternative method to achieve better geopolymerization reaction for kaolin-based geopolymer.