Alkali-Silica Reaction Of Foamed Concrete Containing. Waste Glass as Aggregate

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This research focused on examining Alkali-Silica.Reaction (ASR) of foamed concrete mixes containing different types of crushed waste glass (CWG) with different chemical compositions. The reactivity was determined in sodium hydroxide solution by adopting mortar bar test. Four types of waste glass with different particle sizes and different percentages content were used. From the test results of recorded expansion of these mixes, it was noticed that the coarse glass resulted in more expansion than that of fine glass. Lead-silicate glass (CR) exhibits the maximum expansion followed by soda-lime glass (SL) and boro-silicate glass (BS), while less expansion was recorded in mixes with green glass (GG). As compared to reference mix (FC), it was noted that the mixes with crushed waste glass (SL), (BS), and (CR) undergo notable expansion, while the expansion of the mixes with (GG) slightly increased compared to the reference mix (FC).