

Study Some Properties of Concrete Containing Industrial Styrobore and Modified by Polymer

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This research investigates of the study of some properties of concrete containing styropor and industrial polymer Styrene Butadiene Rubber (SBR) in order to be used for the purposes of lightweight concrete production with good properties of thermal and sonic insulation. The main objective of the study is to produce lightweight concrete used for structural purposes .For this purpose , many tests were conducted on concrete containing styropor and developed by SBR such as compressive strength, flexural strength, density, ultrasonic pulse velocity and sonic impedance. The styropor was added by 0.05 % by weight as a fine aggregate while the SBR was added with two percents 5 and 10 % by weight of cement. The results obtained from this study indicated that the addition of styropor to the concrete reduce the compressive strength and density .The reduction percentages in compressive strength and density were about 90.7% and 38.9% respectively at 28 days. Adding 5% of SBR led to significant increase in compressive strength and other properties compared to the other mixes examined in this study except reference mix.