

عنوان مقاله:

EVALUATION OF THE FLUIDITY AND MECHANICAL PROPERTIES OF LIGHT-WEIGHT SELF-COMPACTING
(CONCRETE CONTAINING EXPANDED POLYSTYRENE (EPS

محل انتشار:

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خلاصه مقاله:

This paper presents the results of an experimental investigation on the effects of expanded polystyrene polymeric beads on the properties of light-weight selfcompacting concrete in fresh and hardened states. Since the aim of this study is to produce structural lightweight self-compacting concrete (with compressive strength above 17 MPa), EPS beads were partially substitute for aggregates by 10, 15, 22.5 and 30 percentages by volume. Fluidity and mechanical properties of selfcompacting EPS concrete was compared with ordinary self-compacting concrete with slump flow of about 65cm. The slump flow was kept in allowable range and the effects of EPS were evaluated on the other fluidity parameters such as V-funnel and L-box. The results obtained, showed that with increasing in EPS volume, Vfunnel time increased while blocking ratio decreased. At the stage of hardened concrete, compressive strength (at different .ages), tensile strength, ultrasonic pulse velocity (UPV) and water absorption were studied

کلمات کلیدی:

light-weight self-compacting concrete, expanded polystyrene, fluidity, mechanical properties

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