

## عنوان مقاله:

Effects of Waste PET Bottles Aggregate On the Seismic behavior of Lightweight Concrete

## محل انتشار:

اولین همایش زلزله و سبک سازی (سال: 1384)

تعداد صفحات اصل مقاله: 10

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## خلاصه مقاله:

This paper investigates the use of Waste Polyethylene Terephthalate (PET) bottles aggregate (WPA) to examine the effect of it on mechanical properties of fresh and hardened concrete. The WPA was made from the waste PET bottles, and experimental tests were conducted to determine compressive strength, splitting tensile strength and slump of waste PET bottles aggregate concrete (WPAC). The 28-day compressive strength of WPAC with the replacement ratio of 2% and 5% (by weight) improves about 45% and 60% respectively, compared to the control concrete in the water–cement ratio of 52%. Also the 28-day splitting tensile strength of WPAC with replacement ratio of 2% and 5% improves about 14% and 20% respectively. The structural efficiency of WPAC improves as the replacement ratio increases but the workability of concrete with 2% WPA decreases about 90% compared to that of the normal concrete .in the water–cement ratio of 52%. So it recommended especially to be used in mass concrete

## کلمات کلیدی:

Waste PET bottles aggregate (WPA); Polyethylene Terephthalate (PET); waste PET bottles aggregate concrete (WPAC); Compressive strength; splitting tensile strength; Workability

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/4588>

