

## عنوان مقاله:

USING SCORIA AS FINE AGGREGATE IN LIGHTWEIGHT MORTAR AND CONCRETE

## محل انتشار:

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## خلاصه مقاله:

In this paper the mechanical properties and workability of lightweight concrete and mortar made with different percentage of scoria instead of sand and different water – cement ratios and cement contents has been studied. In the first part, 0, 20, 30, & 40% scoria instead of sand has applied to make lightweight concrete with 0.5, 0.55, & 0.60 water-cement ratio and 300, 350, 400 Kg/m<sup>3</sup> cement content. The mechanical properties of the samples were measured and the best results were selected to make lightweight mortar. In the second part, 0, 5, 10, 15, ..., 100 % scoria instead of sand were investigated to make lightweight mortar in 0.55 water-cement ratio and 350 Kg/m<sup>3</sup> cement content. The results indicate that the mixture with more than 40% scoria instead of sand for concrete and 60% for mortar are lightweight mixture. Also due to larger water absorption of scoria, the mixture made with different percentages of scoria need larger water–cement ratio for suitable workability.

## کلمات کلیدی:

Scoria, Compressive Strength, Tensile Strength, Density, Slump

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/820780>

