

Compressive Strength of Synthetic Fiber Reinforced Concretes

Authors : Soner Guler, Demet Yavuz, Fuat Korkut

Abstract : Synthetic fibers are commonly used in many civil engineering applications because of its some superior characteristics such as non-corrosive and cheapness. This study presents the results of experimental study on compressive strength of synthetic fiber reinforced concretes. Two types of polyamide (PA) synthetic fiber with the length of 12 and 54 mm are used for this study. The fiber volume ratio is kept as 0.25%, 0.75%, and 0.75% in all mixes. The plain concrete compressive strength is 36.2 MPa. The test results clearly show that the increase in compressive strength for synthetic fiber reinforced concretes is significant. The greatest increase in compressive strength is 23% for PA synthetic fiber reinforced concretes with 0.75% fiber volume.

Keywords : synthetic fibers, polyamide fibers, fiber volume, compressive strength

Conference Title : ICCEUP 2016 : International Conference on Civil Engineering and Urban Planning

Conference Location : Seattle, United States

Conference Dates : August 08-09, 2016