

بعض خواص الكتل الخرسانية المجوفة المصنعة من الخرسانة البوليميرية الخالية من  
الركام الناعم

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No-fines hollow concrete blocks using 10-mm maximum size of aggregate and improved by Styrene Butadiene Rubber (SBR) polymer is manufactured in one of Al-Anbar governorate blocks factory. The concrete mixes, by weight were (1:5) and (1:6) (cement: aggregate). The polymer was added as percentages of cement weight in 3%, 6% and 10%. The following tests are used in this study:

Compressive strength, density, absorption and compressive strength after exposure to high temperature. The tests results were compared with the corresponding results of normal blocks which made in the block factory with (1:2:4) (cement: sand: gravel) by weight mix.

Results also proved that the addition of polymer leads to improvement of blocks properties like compressive strength and compressive strength after exposure to high temperature. The maximum increasing in compressive strength according to blocks made by reference mix was (12.69%) in (41) day test age for blocks with mix proportion by weight equal to (1:5) (cement: agg.) with (6%) (polymer: cement) ratio and for the same blocks, the percentages of increasing equal to (132%) according to blocks factory. This addition also leads to increase the density of blocks and decrease of water absorption. However, for high SBR content (10%), the traditional method of block production is not adequate for no-fines polymer concrete blocks.