

LIGHTWEIGHT SELF-COMPACTING MORTARS BASED ON FOAM GLASS AGGREGATES

Authors

Brahim Safi, Djamilia Aboutaleb, Kahina Chahour, Amrane Belaid

Publication date

2017

Journal

International Multidisciplinary Scientific GeoConference: SGEM

Volume

17

Pages

123-129

Publisher

Surveying Geology & Mining Ecology Management (SGEM)

Description

This study aims to valorise the mineral wastes in particular glass wastes, brick wastes and clay to produce granulated foam glass at different characteristics (G1: Granulate foam glass without additive; G2: Granulate foam glass with 10% clay and Granulate foam glass with 10% Brick wastes). The aggregates of foam glass were manufactured at a temperature 850 C from glass wastes (cullet), brick wastes, clay and limestone as a foaming agent. Mixtures of Self-compacting mortar have been developed with elaborated foam glass aggregates by total substitution of natural sand. Physical (flow, density and porosity) and mechanical tests (compressive strength) were carried on these mortars. The results obtained show that a decreasing of compressive strength of mortars based on foam glass aggregates with lower bulk density but the reduction of strength is depended the used waste nature. Also, it was noted that these ...