

Title: SLAG-BASED HYDRAULIC BINDER, DRY MORTAR COMPOSITION COMPRISING SAME AND SYSTEM FOR ACTIVATING A SLAG-BASED BINDER

Abstract

The aim of the invention is to provide a hydraulic binder based on ground granulated blast-furnace slag, free from Portland cement, which enables improvements in setting and hardening to be obtained.

For this purpose, the invention concerns a hydraulic binder comprising (in % by dry weight);

- A. at least 50 of at least one ground and granulated blast-furnace slag;
- B. more than 5 of at least one calcium aluminate cement and/or of at least one calcium sulfoaluminate cement;
- C. more than 5 of at least one source of sulfate ions;
- D. between 1 and 5 of $\text{Ca}(\text{OH})_2$ and/or of Portland cement;
- E. between 0.01 and 1 of at least one alkali metal carbonate, preferably Li_2CO_3 ;
- F. and at least one alkalifying reagent consisting of at least one alkali metal carbonate and/or bicarbonate, different from E, (NaHCO_3 ; Na_2CO_3 ; K_2CO_3 ; and mixtures thereof);

subject to the following conditions:

- (i) the amount of C is sufficient to allow the sulfate ions of C to react with B and with A;
- (ii) the amount of F is sufficient so that its reaction with component D in the presence of water brings the pH of the resulting wet formulation to a value of not less than 12, for a water-to-mortar mixing rate of between 10 and 35% by weight.

[No figure]