

CONCRETE WITH A LOW CONTENT OF CEMENT**ABSTRACT**

The invention provides a mixture comprising in mass proportions:

- from 0.4 to 4%, preferably from 0.8 to 1.7%, of materials in the ultrafine particle size range, comprising particles with a D90 less than 1 μm and/or with a specific BET surface area greater than 6 m^2/g ;
- from 1 to 6%, preferably from 2 to 5%, of Portland cement;
- from 8 to 25%, preferably from 12 to 21%, of materials in the fine particle size range, comprising particles wherein the D10 and the D90 are from 1 μm and 100 μm and with a specific BET surface area less than 5 m^2/g , different from the cement;
- from 25 to 50%, of particles wherein the D10 and the D90 are from 100 μm and 5 mm; and
- from 25 to 55%, preferably from 35 to 47%, of materials in the larger particle size range, comprising particles wherein the D10 is greater than 5 mm.

The invention also notably provides premixes, concrete compositions and associated objects of hardened concrete, as well as their preparation processes.

Figure 1a