

Title (en)

METHODS FOR MAKING GEOPOLYMERIC CEMENTS AND CEMENTS RESULTING FROM THESE METHODS

Title (de)

VERFAHREN ZUR HERSTELLUNG GEOPOLYMEREN ZEMENTE UND ZEMENTE HERGESTELLT DURCH DIESES VERFAHREN

Title (fr)

METHODES DE FABRICATION DE CEMENTS GEOPOLYMERIQUES ET CEMENTS OBTENUS PAR CES METHODES

Publication

**EP 0891310 A1 19990120 (FR)**

Application

**EP 98902074 A 19980114**

Priority

- FR 9800059 W 19980114
- FR 9700332 A 19970115

Abstract (en)

[origin: FR2758323A1] The invention concerns a method for making geopolymeric cement consisting in producing a reaction mixture containing (parts in weight of dry matter):<u>reagent (I):</u>100 parts by weight of aluminosilicate oxide [Si<sub>2</sub>O<sub>5</sub>,Al<sub>2</sub>O<sub>2</sub>]<sub>9</sub>[Si<sub>2</sub>O<sub>5</sub>,Al<sub>2</sub>(OH)<sub>3</sub>], or simplified below as (Si<sub>2</sub>O<sub>5</sub>Al<sub>2</sub>O<sub>2</sub>)(IV-V); <u>reagent (II):</u> 30-55 parts of alkali silicate in which the mol ratio M<sub>2</sub>O/SiO<sub>2</sub> ranges between 0.5 and 0.8, M representing Na and/or K or the mixture Na+K; <u>reagent (III):</u> 80-110 parts of basic silicate, in glass state, consisting partly of gehlenite, akermanite and wollastonite; <u>reagent (IV):</u> 150-250 parts of alkali aluminosilicate containing at least 5 % by weight of (Na<sub>2</sub>O+K<sub>2</sub>O), preferably at least 8 % by weight; then in hardening said mixture by adding water: After hardening the geopolymeric cements are made of two distinct phases: a) a glass phase having a MAS NMR spectrum for <sup>29</sup>Si with a band ranging between -85 and -89ppm, and a MAS NMR spectrum for <sup>27</sup>Al with a resonance at 54-58ppm; b) a crystalline phase having a MAS NMR spectrum for <sup>29</sup>Si with a band ranging between -90ppm and -115ppm, and a MAS NMR spectrum for <sup>27</sup>Al with a resonance at 57ppm.

IPC 1-7

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CPC (source: EP)

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