



(11) **EP 0 697 382 B1**

(12) **EUROPEAN PATENT SPECIFICATION**

(45) Date of publication and mention  
of the grant of the patent:  
**16.12.2009 Bulletin 2009/51**

(51) Int Cl.:  
**C04B 26/28 (2006.01) C04B 18/16 (2006.01)**  
**C04B 14/36 (2006.01) C04B 28/14 (2006.01)**

(21) Application number: **95305416.0**

(22) Date of filing: **02.08.1995**

(54) **A gypsum/cellulosic fiber acoustical tile composition**

Eine Gips/Zellulosefaser enthaltende Zusammensetzung für Schallziegel

Une composition pour dalle acoustique en plâtre et fibre cellulosique

(84) Designated Contracting States:  
**AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL  
PT SE**

(30) Priority: **08.08.1994 US 287392**

(43) Date of publication of application:  
**21.02.1996 Bulletin 1996/08**

(73) Proprietor: **USG INTERIORS, Inc.**  
**Chicago,**  
**Illinois 60606-4678 (US)**

(72) Inventor: **Baig, Mirza A.**  
**Des Plaines,**  
**Illinois 60016 (US)**

(74) Representative: **Johnson, Terence Leslie**  
**Marks & Clerk LLP**  
**90 Long Acre**  
**London**  
**WC2E 9RA (GB)**

(56) References cited:  
**EP-A- 0 370 703 EP-A- 0 663 374**  
**DE-A- 1 494 393 US-A- 3 988 199**  
**US-A- 5 013 405**

Note: Within nine months of the publication of the mention of the grant of the European patent in the European Patent Bulletin, any person may give notice to the European Patent Office of opposition to that patent, in accordance with the Implementing Regulations. Notice of opposition shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

**EP 0 697 382 B1**



Europäisches Patentamt  
European Patent Office  
Office européen des brevets



(11) **EP 0 697 382 A2**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:  
21.02.1996 Bulletin 1996/08

(51) Int Cl.<sup>6</sup>: **C04B 26/28, C04B 18/16**

(21) Application number: **95305416.0**

(22) Date of filing: **02.08.1995**

(84) Designated Contracting States:  
**AT BE CH DE DK ES FR GB GR IE IT LI LU MC  
NL PT SE**

(71) Applicant: **USG INTERIORS, Inc.**  
**Chicago, Illinois 60606-4678 (US)**

(30) Priority: **08.08.1994 US 287392**

(72) Inventor: **Balg, Mirza A.**  
**Des Plaines, Illinois 60016 (US)**

(74) Representative: **Johnson, Terence Leslie**  
**London WC2A 1SD (GB)**

(54) **A gypsum/cellulosic fiber acoustical tile composition**

(57) An acoustical tile composition based on a gypsum/cellulosic fiber composition which can replace all or a portion of the mineral wool normally present in acoustical ceiling tiles. The gypsum/cellulosic fiber composition is combined with a lightweight aggregate material and a binder to form a composition which is used in a water-felting process to manufacture acoustical ceiling tiles and panels. The preferred source of the cellulosic fiber is a composite gypsum/cellulose fiber material

which is prepared by mixing the gypsum and cellulosic fiber material with sufficient water to form a dilute slurry which is then heated under pressure to calcine the gypsum, converting it to an alpha calcium sulfate hemihydrate. The resulting composite material comprises cellulosic fibers physically interlocked with calcium sulfate crystals. Another source of both gypsum and cellulosic fibers is waste (scrap) gypsum wallboard. Expanded perlite is the preferred lightweight aggregate material.

EP 0 697 382 A2