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(54) **JOINT COMPOUND AND METHOD OF MAKING SAME**

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(52) **U.S. Cl.** **106/793**; 106/794; 106/817; 106/DIG. 3

(58) **Field of Search** ..... 106/793, 794, 106/817, 819, 823, DIG. 3, 792

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,287,103 A	*	9/1981	Francis et al.	
4,686,253 A	*	8/1987	Struss et al.	524/44
4,818,506 A		4/1989	Lin et al.	423/242
4,845,152 A	*	7/1989	Palmer	524/734
5,080,801 A		1/1992	Molter et al.	210/699
5,336,318 A	*	8/1994	Attard et al.	106/780
5,653,797 A	*	8/1997	Patel	106/781
5,779,786 A	*	7/1998	Patel	106/781
5,849,095 A		12/1998	Rouillard	134/3
5,863,975 A	*	1/1999	Whitton et al.	524/445
5,866,012 A		2/1999	Austin et al.	210/701
6,228,163 B1	*	5/2001	Espinoza et al.	106/778

FOREIGN PATENT DOCUMENTS

EP	0 823 409 A1	11/1998
GB	2 335 657 A	9/1999

OTHER PUBLICATIONS

ALCOSPERSE 408 Material Safety Data Sheet, Alco Chemical, Chattanooga, TN, (Jan. 6, 2000).

ALCOSPERSE® 408 Technical Information bulletin, Alco Chemical, Chattanooga, TN, (Dec. 20, 1999).

Sodium Polyacrylate Copolymer Solution (Rhodoline 231) Material Safety Data Sheet, Rhodia, Cranbury, NJ (Dec. 18, 1995).

ASTM Special Technical Publication 861 "Chemistry and Technology of Gysum", Richard A. Kuntze Ed., Kuntze Ed., Atlanta, GA (1984).

ALCOSPERSE 408–D Polymer Full Public Report released by the National Industrial Chemicals Notification and Assessement Scheme, Worksafe Australia, Sydney, Australia (Oct. 1995).

* cited by examiner

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(57) **ABSTRACT**

A joint compound includes water, calcium carbonate, and a water-soluble polymeric set retarder formed from a monomer having two or more carboxyl groups. The joint compound is useful in various applications and in a hybrid joint compound made with a calcium sulfate hemihydrate setting-type joint compound.

1 Claim, No Drawings