

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
17 April 2003 (17.04.2003)

PCT

(10) International Publication Number
WO 03/031365 A1

- (51) International Patent Classification⁷: **C04B 24/32**, 24/16, 24/26, 28/04, 28/14
- (21) International Application Number: PCT/US02/29145
- (22) International Filing Date:
12 September 2002 (12.09.2002)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
09/976,658 9 October 2001 (09.10.2001) US
- (71) Applicant: **HERCULES INCORPORATED** [US/US];
Hercules Plaza, 1313 North Market Street, Wilmington, DE
19894-0001 (US).
- (72) Inventors: **CHEN, Fu**; 1057 Ballintree Lance, West
Chester, PA 19382 (US). **CHU, Sung, G.**; 8 Live Oak,
South Wood, Hockessin, DE 19707 (US). **KOLSON,**
Natalie, A.; 411 N. Walnut Street, West Chester, PA 19380
(US).
- (74) Agent: **EDWARDS, David**; Hercules Incorporated, Her-
cules Plaza, 1313 North Market Street, Wilmington, DE
19894-0001 (US).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG,
SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN,
YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK,
TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).
- Published:**
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: SUPERPLASTICIZER FOR CONCRETE AND SELF-LEVELING COMPOUNDS

(57) Abstract: A building material is composed of a co- or ter-polymer of (i) a material selected from carboxylic acid, sulfonic acid, phosphonic acid, a amide form thereof or mixtures thereof and (ii) at least one polyethylene glycol monoalkyl either sulfate and a binding material of cement or gypsum. This building material can be used throughout the construction industry in many applications because the superplasticizer provides improved fluidity and yet is economical and efficient.



WO 03/031365 A1