(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 28 September 2006 (28.09.2006)

(51) International Patent Classification: B05D 7/00 (2006.01) B05D 1/36 (2006.01)

(21) International Application Number:

PCT/US2006/010698

(22) International Filing Date: 22 March 2006 (22.03.2006)

(25) Filing Language: English

(26) Publication Language: **English**

(30) Priority Data:

60/663,737 22 March 2005 (22.03.2005) US 60/665,932 29 March 2005 (29.03.2005) US

(71) Applicant and

(72) Inventor: BURCHILL, Stuart, G., Jr. [US/US]; 1998 Morning Sun Lane, Naples, FL 34119 (US).

(74) Agent: MCLELAND, Le-Nhung; Mcleland & Associates, P.L.L.C., 9679-C Main Street, Fairfax, VA 22031 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, (10) International Publication Number WO 2006/102568 A3

GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 11 January 2007

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: HIGHLY POROUS COATED FINE PARTICLES, COMPOSITION, AND METHOD OF PRODUCTION

(57) Abstract: Fine particles of a highly porous, low density material in which the pore chambers have been at least partially evacuated and refilled with a gas having a low thermal conductivity, and the obtained particles are encapsulated with a protective, durable coating. The particles are particularly useful as durable thermal insulating material.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US06/10698

A. CLASSIFICATION OF SUBJECT MATTER IPC: B05D 7/00(2006.01),1/36(2006.01)					
ir C.	DUSD 7700(2000.01),1730(2000.01)				
USPC: 427/212,215,220;428/402,403,404 According to International Patent Classification (IPC) or to both national classification and IPC					
B. FIELDS SEARCHED					
Minimum documentation searched (classification system followed by classification symbols) U.S.: 427/212,215,220; 428/402,403,404; 423/338; 516/98,111,112					
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched					
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)					
C DOCUMENTS CONTIDENED TO BE BELLIANT					
Category *	Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No US 5,409,683 A (Tillostson et al) Apr. 25, 1995 (25.04.1995)			Relevant to claim No.	
A	US 5,313,485 A (Hamil et al) 17 May 1994 (17.05.1994)				
A US 6,613,383 B1 (George et al) 2 Sep. 2003 (2.09.20					
	The limit of the section of Day Co.		C		
	documents are listed in the continuation of Box C.		See patent family annex. later document published after the inte	ernational filing date or priority	
Special categories of cited documents: "" "" "" "" "" "" "" "" ""		1	date and not in conflict with the applic principle or theory underlying the inve	ation but cited to understand the	
"A" document defining the general state of the art which is not considered to be of particular relevance					
"E" earlier application or patent published on or after the international filing date		"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone		
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)		"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination		
"O" document referring to an oral disclosure, use, exhibition or other means		being obvious to a person skilled in			
"P" document published prior to the international filing date but later than the priority date claimed		"&" document member of the same patent family			
Date of the actual completion of the international search			Date of mailing of the international search report 3 0 OCT 2006		
01 October 2006 (01.10.2006)			U UC I ZUUb		
Name and mailing address of the ISA/US Mail Stop PCT, Atm: ISA/US			Authorized officer Ponondea for Bear		
Commissioner for Patents		Abul Kalam			
P.O. Box 1450 Alexandria, Virginia 22313-1450			e No. 571-272-8346		
Facsimile No. (571) 273-3201					

Form PCT/ISA/210 (second sheet) (April 2005)