

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
30 May 2003 (30.05.2003)

PCT

(10) International Publication Number
WO 03/044266 A3

(51) International Patent Classification⁷: **D06N 7/00**,
D06M 11/68, D05C 17/02, C09D 5/18

(21) International Application Number: PCT/US02/36393

(22) International Filing Date:
14 November 2002 (14.11.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/334,797 15 November 2001 (15.11.2001) US

(71) Applicant (*for all designated States except US*): **INTER-
FACE, INC.** [US/US]; 2859 Paces Ferry Road, Suite 2000,
Atlanta, GA 30339 (US).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **HENSLER, Connie,
D.** [US/US]; 3255 Colquitt Trail, Kennesaw, GA 30152
(US). **BERARD, Raymond, A.** [US/US]; 575 Chastain
Road, NW, Kennesaw, GA 30144 (US).

(74) Agents: **PRATT, John, S.** et al.; Kilpatrick Stockton LLP,
Suite 2800, 1100 Peachtree Street, Atlanta, GA 30309
(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, SC, SD, SE,
SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US,
UZ, VC, 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

(88) Date of publication of the international search report:
18 December 2003

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(54) Title: TEXTILE PRODUCTS HAVING FLAME RETARDANT PROPERTIES AND METHODS OF MANUFACTURE

(57) Abstract: A textile product with enhanced flame and/or smoke retardant properties and a method of forming the same is disclosed. The textile product is comprised of a textile material having a primary layer or backing with intumescent particles coated, sprayed, sprinkled, or otherwise applied to the upper surface thereof. Additionally or alternatively, the particles may be incorporated into the tufting primary or backing. The intumescent particles may also be complexed with additional agents, such as antimicrobial agents, softening agents, pliability agent, stain resistant agents, waterproofing agents, static resistance agents and combinations thereof.



WO 03/044266 A3

INTERNATIONAL SEARCH REPORT

Intern: Application No
PCT/US 02/36393

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 D06N7/00 D06M11/68 D05C17/02 C09D5/18

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)
IPC 7 D06N D05C C09K D06M C09D

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 practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 041 707 A (PERRI JOSEPH M) 3 July 1962 (1962-07-03)	1,2,7,8
A	the whole document ---	3,6
X	US 3 825 464 A (CROWLEY R) 23 July 1974 (1974-07-23)	1,2,7,9
A	column 1, last paragraph -column 3, line 27; claims 1,18 ---	3,6
X	DATABASE WPI Section Ch, Week 198417 Derwent Publications Ltd., London, GB; Class A17, AN 1984-104465 XP002236586 & JP 59 047468 A (CHISSO CORP), 17 March 1984 (1984-03-17) abstract --- -/--	1,2,7,9

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *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)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *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
- *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 being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the international search

31 March 2003

Date of mailing of the international search report

09/04/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Pamies Olle, S

INTERNATIONAL SEARCH REPORT

Intern: Application No
PCT/US 02/36393

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 061 810 A (MINHAS PRITAM SINGH ET AL) 6 December 1977 (1977-12-06) column 4, line 17 - line 36; claims 1,18 -----	1,2,7,8
A	US 3 719 547 A (BLACK W ET AL) 6 March 1973 (1973-03-06) column 1; last paragraph -column 3, line 71 -----	1,2,7,8
A	US 3 859 151 A (VINCENT DAVID N ET AL) 7 January 1975 (1975-01-07) cited in the application claims -----	1,2,7-9

INTERNATIONAL SEARCH REPORT

Information on patent family members

Intern: Application No
PCT/US 02/36393

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 3041707	A	03-07-1962	NONE	
US 3825464	A	23-07-1974	DE 2115842 A1 GB 1332554 A US 3694873 A US 3686046 A	14-10-1971 03-10-1973 03-10-1972 22-08-1972
JP 59047468	A	17-03-1984	NONE	
US 4061810	A	06-12-1977	NONE	
US 3719547	A	06-03-1973	NONE	
US 3859151	A	07-01-1975	NONE	