

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

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
22 May 2008 (22.05.2008)

PCT

(10) International Publication Number
WO 2008/061177 A3

(51) **International Patent Classification:**
D21H 19/56 (2006.01)

(21) **International Application Number:**

PCT/US2007/084781

(22) **International Filing Date:**

15 November 2007 (15.11.2007)

(25) **Filing Language:**

English

(26) **Publication Language:**

English

(30) **Priority Data:**

60/859,219 15 November 2006 (15.11.2006) US

(71) **Applicant (for all designated States except US):** **DOW GLOBAL TECHNOLOGIES INC.** [US/US]; 2040 Dow Center, Midland, MI 48674 (US).

(72) **Inventors; and**

(75) **Inventors/Applicants (for US only):** **DOBLER, Francis** [FR/CH]; Im Gassacher 7, CH-8122 Binz ZH (CH). **TU-BERGA, Giorgio, M.** [IT/CH]; Rotihalde 23, CH-8820 Wadenswil ZH (CH).

(74) **Agent:** **HAYHURST, Paul, D.;** The Dow Chemical Company, Intellectual Property, P.O. Box 1967, Midland, MI 48674-1967 (US).

(81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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, MT, 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:**
24 July 2008

(54) **Title:** PAPER COATING COMPOSITION

(57) **Abstract:** The coat weight of coated paper and paperboard is improved in film press coating processes by using a coating color comprising a filler, a binder, and a water-soluble alkylene oxide polymer having a weight average molecular weight of at least 100,000.



WO 2008/061177 A3

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2007/084781

A. CLASSIFICATION OF SUBJECT MATTER
 INV. D21H19/56

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)
 D21H

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, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 298 335 A (REED W MICHAEL [US] ET AL) 29 March 1994 (1994-03-29) claims 1-13; example 1 -----	1,8
Y	EP 0 199 874 A (MEAD CORP [US]) 5 November 1986 (1986-11-05) claims 1-17; examples 1,2 -----	1,8
Y	EP 0 651 093 A (AQUALON CO [US]) 3 May 1995 (1995-05-03) claims 1-14; example 8 -----	1,8
Y	US 2005/143511 A1 (SUAU JEAN-MARC [FR] ET AL) 30 June 2005 (2005-06-30) claims 20-62; example 15 -----	1,8
	-/--	

Further documents are listed in the continuation of Box C.

See patent family 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.
- "&" document member of the same patent family

Date of the actual completion of the international search

30 May 2008

Date of mailing of the international search report

05/06/2008

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

Karlsson, Lennart

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2007/084781

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, or the relevant passages	Relevant to claim No
Y	US 5 853 900 A (SCHULER BERNHARD [DE] ET AL) 29 December 1998 (1998-12-29) column 3, lines 30-35; example 6 -----	1,8
A	EP 0 024 602 A (BAYER AG [DE]) 11 March 1981 (1981-03-11) the whole document -----	1-20
A	EP 0 718 379 A (SANYO CHEMICAL "IND LTD [JP]) 26 June 1996 (1996-06-26) the whole document -----	1-20
A	US 3 976 626 A (TURCK ULRICH) 24 August 1976 (1976-08-24) the whole document -----	1-20

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/084781

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5298335	A	29-03-1994 CA 2104536 AI	01-03-1994
EP 0199874	A	05-11-1986 CN 86100080 A JP 61209190 A	05-11-1986 17-09-1986
EP 0651093	A	03-05-1995 AT 174982 T AU 675170 B2 AU 7757194 A CA 2134629 AI DE 69415477 DI DE 69415477 T2 FI 944936 A JP 7238496 A NO 944068 A US 5494509 A	15-01-1999 23-01-1997 18-05-1995 30-04-1995 04-02-1999 02-06-1999 30-04-1995 12-09-1995 02-05-1995 27-02-1996
US 2005143511	AI	30-06-2005 NONE	
US 5853900	A	29-12-1998 NONE	
EP 0024602	A	11-03-1981 BR 8005275 A CA 1163395 AI DE 2933765 AI ES 8106747 AI FI 802609 A JP 56030456 A NO 802401 A	04-03-1981 06-03-1984 12-03-1981 16-11-1981 22-02-1981 27-03-1981 23-02-1981
EP 0718379	A	26-06-1996 CA 2171214 AI CN 1134717 A DE 69512874 DI DE 69512874 T2 FI 961070 A UO 9601877 AI US 6271300 BI	25-01-1996 30-10-1996 25-11-1999 09-03-2000 07-03-1996 25-01-1996 07-08-2001
US 3976626	A	24-08-1976 DE 2416481 AI FR 2266705 AI GB 1494923 A IT 1035149 B JP 962420 C JP 50138028 A JP 53037110 B NL 7503978 A SE 411215 B SE 7503709 A	09-10-1975 31-10-1975 14-12-1977 20-10-1979 20-07-1979 04-11-1975 06-10-1978 07-10-1975 10-12-1979 06-10-1975