

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
1 July 2004 (01.07.2004)

PCT

(10) International Publication Number
WO 2004/054796 A3

(51) International Patent Classification⁷: **B32B 7/06**,
27/32, 27/08

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, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number:
PCT/US2003/035504

(22) International Filing Date:
7 November 2003 (07.11.2003)

(84) Designated States (*regional*): ARIPO patent (BW, 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, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/319,146 13 December 2002 (13.12.2002) US

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

(71) Applicant (*for all designated States except US*): **EXXON-MOBIL OIL CORPORATION** [US/US]; 13501 Katy Freeway, Houston, TX 77079 (US).

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

(72) Inventor; and
(75) Inventor/Applicant (*for US only*): **KONG, Dan-Cheng** [US/US]; 17 Whitebrook Rise, Fairport, NY 14450 (US).

(74) Agent: **PHILLIPS, Richard, F.**; ExxonMobil Chemical Company, P.O. Box 2149, Baytown, TX 77522-2149 (US).

(88) Date of publication of the international search report:
30 September 2004

(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,

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.



WO 2004/054796 A3

(54) Title: SEALABLE AND PEELABLE FILM STRUCTURE

(57) Abstract: A sealable and peelable film, including at least (a) a core layer containing a peelable blend and (b) a pair of outer layers, at least one of which is a sealable outer layer, each independently containing a thermoplastic polymer. The peelable blend of the core layer (a) may contain (i) from 20-80 wt% of a polyethylene and (ii) from 80-20 wt% of a polyolefin incompatible with polyethylene (i), or it may contain (i) from 10-35 wt% of ethylene- α -olefin elastomer and (ii) from 90-65 wt% of propylene homopolymer. The film may also include an intermediate layer containing a propylene homopolymer, wherein the intermediate layer is positioned between the core layer containing the peelable blend and the sealable outer layer.

INTERNATIONAL SEARCH REPORT

International Application No

JS 03/35504

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B32B7/06 B32B27/32 B32B27/08

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 B32B

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.
X	US 5 773 136 A (ALDER PAUL THOMAS ET AL) 30 June 1998 (1998-06-30) column 2, line 11 - column 3, line 22 column 3, line 41 - line 54 column 4, line 12 - line 44 column 4, line 60 - column 5, line 3; examples column 6, line 65 - column 7, line 22; claims	1-4, 7-12,14, 18
X	----- US 6 231 975 B1 (PEET ROBERT G ET AL) 15 May 2001 (2001-05-15) cited in the application column 1, line 4 - column 4, line 67; claims; examples II,III,IV ----- -/--	1-5, 7-11,13, 18

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

Date of the actual completion of the international search

30 April 2004

Date of mailing of the international search report

1.1 08 2004

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

Kanetakis, I

INTERNATIONAL SEARCH REPORT

International Application No

PC 03/35504

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	US 2003/134159 A1 (PEET ROBERT G) 17 July 2003 (2003-07-17) paragraphs [0005] - [0014], [0020], [0022] - [0026], [0029], [0031] - [0035], [0037] - [0039], [0044] - [0049], [0051], [0052]; claims 1,2,5,7-19,22,24-26; figure 1 -----	1-5, 7-13,18

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 03/35504

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-16, 18

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-16,18

An oriented, sealable and peelable film comprising a core layer (b) comprising a peelable blend comprising (i) from 20-80 wt% of a polyethylene and (ii) from 80-20 wt% of a polyolefin incompatible with polyethylene (i); and a pair of outer layers (a) and (c), the outer layer (a) comprising a thermoplastic polymer, the outer layer (c) being a sealable layer comprising a thermoplastic polymer, wherein core layer (b) is positioned between layers (a) and (c)

2. claim: 17

An oriented, sealable and peelable film comprising a core layer (b) comprising a peelable blend comprising (i) from 10-35 wt% of ethylene-alpha olefin elastomer, and (ii) from 90-65 wt% of propylene homopolymer; and a pair of outer layers (a) and (c), the outer layer (a) comprising a thermoplastic polymer, the outer layer (c) being a sealable layer comprising a thermoplastic polymer, wherein core layer (b) is positioned between outer layers (a) and (c)

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 03/35504

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5773136	A	30-06-1998	GB 2296466 A ,B 03-07-1996 AU 700614 B2 07-01-1999 AU 4271396 A 19-07-1996 CA 2183087 A1 04-07-1996 DE 69526214 D1 08-05-2002 DE 69526214 T2 08-08-2002 EP 0746468 A1 11-12-1996 ES 2174971 T3 16-11-2002 WO 9620085 A1 04-07-1996 ZA 9510672 A 30-05-1996
US 6231975	B1	15-05-2001	AU 733024 B2 03-05-2001 AU 5920498 A 18-08-1998 BR 9815446 A 16-10-2001 CA 2278644 A1 30-07-1998 CN 1244155 T 09-02-2000 EP 0954437 A1 10-11-1999 ID 24642 A 27-07-2000 JP 2001509100 T 10-07-2001 WO 9832596 A1 30-07-1998 US 2001031371 A1 18-10-2001
US 2003134159	A1	17-07-2003	NONE