

1) Family number: 34972003 (US2009030100A)

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Title: FINE PORE FORMATION AGENT FOR POROUS RESIN FILM AND COMPOSITION CONTAINING THE SAME FOR POROUS RESIN FILM

Abstract: A fine pore formation agent for a porous resin film is provided which comprises inorganic particles satisfying (a) 0.1 less than or equal to D50 less than or equal to 1.5 (μm) (D50: average particle diameter of particles in 50 percent cumulative total by weight from the larger particle side by micro-track FRA), (b) Da less than or equal to 20 (μm) (Da: maximum particle diameter by micro-track FRA), (c) 3 less than or equal to Sw less than or equal to 60 (m²/g) (Sw: BET specific surface area measured by nitrogen adsorption method), (d) Ir less than or equal to 1.0x10⁵ (Ω·cm) (Ir: volume resistivity (Ω·cm)). The fine pore formation agent for a porous resin film is capable of providing a resin composition giving a porous resin film useful in uses for electric parts such as capacitors and battery separators.

Classifications:

International (IPC 8-9): B29C44/04 B32B1/00 B32B5/16 C01B25/32 C01F11/18 C01F11/46 C01F5/14 C08J5/18 C08J9/00 C08J9/35 C08K3/10 C08K9/00 C09C1/00 C09C3/08 H01G11/52 H01G9/02 H01M2/16 (Advanced/Invention); C01F11/18 (Advanced/Non-invention);

B32B1/00 C01B25/00 C01F11/00 C01F5/00 C08J5/18 C08J9/00 C08K3/00 C08K3/26 C08K9/00 H01M2/16 (Core/Invention)

International (IPC 1-7): C01B25/32 C08J9/00 C08K 3/26

CPC: C01B25/32 C01F5/14 C01F11/18 C01F11/46 C01P2004/61 C01P2004/62 C01P2006/12 H01M2/145 H01M2/1653 Y10T428/2982

European: C01B25/32 C01F11/18 C01F11/46B C01F5/14 H01M2/14M H01M2/16C3 M01P4/61 M01P4/62 M01P6/12 Y02E60/12

US: 264/45.1 428/402 428/402S 521/142 521/142P 523/205

Family:

Publication number	Publication date	Application number	Application date
CN101379120 A	20090304	CN200780004373	20070131
CN101379120 B	20120411	CN200780004373	20070131
EP1985650 A1	20081029	EP20070706292	20070131
EP1985650 A4	20101027	EP20070706292	20070131
IN02868KN2008 A	20090206	IN2008KN02868	20080715
JP2007088707 A1	20090625	JP20070556800T	20070131
JP2013213212 A2	20131017	JP20130080962	20130409
JP5305663 B1	20131002	JP20070556800T	20070131
JP5305663 B2	20131002	JP20070556800T	20070131
JP5837529 B2	20151224	JP20130080962	20130409
KR101380184 B1	20140401	KR20087018841	20070131
KR20080098594 A	20081111	KR20087018841	20070131
MY144291 A	20110829	MY20080002803	20080728
TH107920 A	20110520	TH20071000446	20070201
TH63578 B	20180710	TH20071000446	20070201
US2009030100 AA	20090129	US20070162893	20070131
US7977410 BB	20110712	US20070162893	20070131
WO07088707 A1	20070809	WO2007JP00043	20070131

Priority:

JP20060024447 20060201 JP20070556800 20070131 WO2007JP00043 20070131
JP20070556800T 20070131 JP20130080962 20130409

Probable Assignee: MARUO CALCIUM CO LTD

Assignee(s): (std): HOJO HISAKAZU ; KASAHARA HIDEMITSU ; MARUO CALCIUM ; NAGAMATSU MAKOTO ; SHIMIZU SEIYA ; SUMITOMO CHEMICAL CO

Assignee(s): SUMITOMO CHEMICAL COMPANY LIMITED ; SUMITOMO CHEMICAL CO LTD ; MARUO CALCIUM CO ; MARUO CALCIUM CO LTD ; MARUO CALCIUM COMPANY LIMITED

Inventor(s): (std): SHIMIZU SEIYA ; NAGAMATSU MAKOTO ; KASAHARA HIDEMITSU ; HOJO HISAKAZU ; MAKOTO NAGAMATSU ; SEIYA SHIMIZU ; HIDEMITSU KASAHARA ; HISAKAZU HOJO ; HOJO JUICHI

Agent(s): VOSSIUS AND PARTNER; KRATZ QUINTOS AND HANSON LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

2) Family number: 28184035 (US2002034610A)

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Title: FILMS HAVING A MICROFIBRILLATED SURFACE AND METHOD OF MAKING

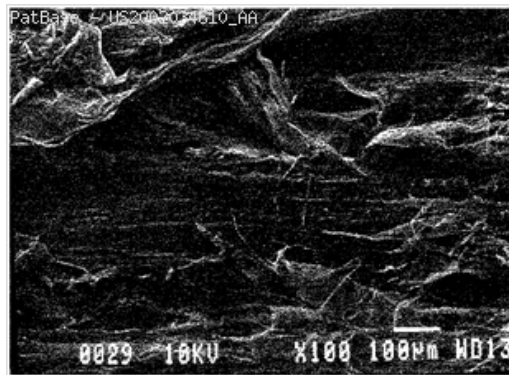
Abstract: Fibers and microfibrillated articles are provided by imparting fluid energy to at least one surface of a highly oriented, voided, melt-processed polymeric film. The fibers and microfibrillated articles are useful as tape backings, filters, thermal and acoustical insulation and as reinforcement fibers for polymers or cast building materials such as concrete.

Classifications:

International (IPC 8-9): B32B27/12 B32B5/02 C08J5/18 C08J9/38 C08K3/00 C08L101/00 C08L23/10 D04H13/02 (Advanced/Invention); B32B5/02 C08J5/18 C08K3/00 C08L101/00 (Advanced/Non-invention); B32B27/12 B32B5/02 C08J5/18 C08J9/00 C08K3/00 C08L101/00 C08L23/00 D04H13/00 (Core/Invention)
International (IPC 1-7): B06B1/20 B29C47/00 B29C55/04 B29C55/12 B32B3/26 B32B5/02 B32B5/24 C08J5/18 C08J9/38 C08K3/00 C08L101/00 C08L23/10 D01D5/42 D04H13/02
CPC: Y10S428/91 D04H13/02 B32B27/12 Y10T428/24355 Y10T428/24372 Y10T428/24405 Y10T428/24446 Y10T428/24471 Y10T428/2495 Y10T442/689 C08J5/18

European: B32B27/12 C08J5/18 D04H13/02

US: 264/147 264/147S 264/154 264/154S 264/210.6 264/210.600S 264/288.8 264/288.800S 264/290.2 264/290.200S 264/442 264/442S 264/444 264/444S 264/504 264/504S 264/562 264/562S 428/141 428/141P 428/143 428/147 428/152 428/155 428/213 428/220 428/910 442/408

**Family:**

Publication number	Publication date	Application number	Application date
AU199959056 A1	20001121	AU19990059056	19990901
AU199959056 A5	20001121	AU19990059056	19990901
AU2002362303 AA	20030401	AU20020362303	20020731
BRPI9917290 A	20020219	BR1999PI17290	19990901
CA2371180 AA	20011023	CA19992371180	19990901
CN1352663 A	20020605	CN19998016625	19990901
DE69922265 D1	20041230	DE19996022265	19990901
DE69922265 D1	20041230	DE19996022265T	19990901
DE69922265 T2	20051201	DE19996022265T	19990901
EP1177244 A1	20020206	EP19990946705	19990901
EP1177244 B1	20041124	EP19990946705	19990901
JP2002544310 T2	20021224	JP20000616270T	19990901
KR20020005739 A	20020117	KR20017014138	19990901
US2002034610 AA	20020321	US20010957405	20010920
US6331343 BA	20011218	US19990307577	19990507
US6586073 BB	20030701	US20010957405	20010920
WO0068301 A1	20001116	WO1999US19973	19990901
WO03025049 A1	20030327	WO2002US24439	20020731

Priority:

US19990307577 19990507 WO1999US19973 19990901 US20010957405 20010920
WO2002US24439 20020731

Probable Assignee: 3M CO

Assignee(s): (std): 3M CO ; 3M CO MINNESOTA MINING AND MFG COMPANY ; 3M INNOVATIVE PROPERTIES CO

Assignee(s): 3M INNOVATIVE PROPERTIES CO ST PAUL ; 3M INNOVATIVE PROPERTIES COMPANY ; DAMODARAN SUNDARAVEL ; PEREZ MARIO A ; SWAN MICHAEL D

Inventor(s): (std): SWAN M D ; DAMODARAN S ; PEREZ M A ; PEREZ MARIO A ; DAMODARAN SUNDARAVEL ; SWAN MICHAEL D ; SWAN MICHAEL DAVID ; PEREZ MARIO ALBERTO ; PEREZ A ; SWAN D

Inventor(s): M D SWAN ; M A PEREZ ; MD SWAN ; S DAMODARAN ; MA PEREZ ; MICHAEL D SWAN ; SUNDARAVEL DAMODARAN ; MARIO A PEREZ ; MICHAEL DAVID SWAN ; MARIO ALBERTO PEREZ

Agent(s): SMART AND BIGGAR; NISHIYAMA MASAYA; ISHIDA TAKASHI; TSURUTA JUNICHI; HIGUCHI SOTOJI; FUKUMOTO TSUMORU

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

3) Family number: 48909054 (US2011137263A)

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Title: SYRINGE STOPPER

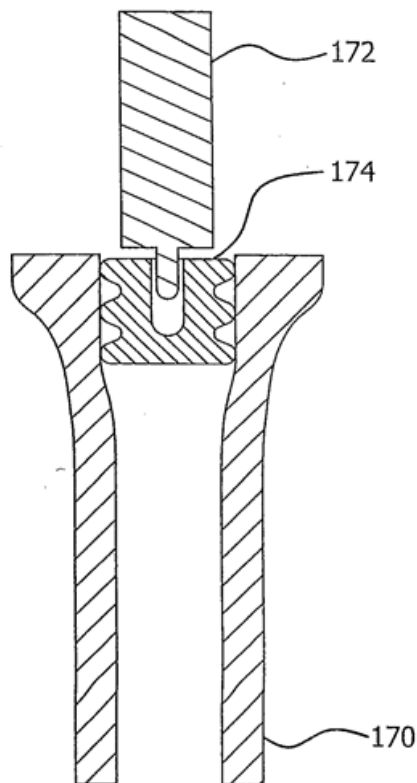
Abstract: A syringe stopper that is suitable for use in syringes without silicone oil or other liquid lubricants. The invention provides a low friction barrier between an elastomeric stopper material and a therapeutic in the syringe. The barrier may inhibit materials from leaching from the elastomer material or from extraction of compounds from medicants by the elastomer. A process is also described that allows for molding thin barrier layers while allowing adequate bonding with the elastomer.

Classifications:

International (IPC 8-9): A61J1/05 A61J1/14 A61K35/12 A61K38/48 A61L31/00 A61M A61M5/178 A61M5/24 A61M5/28 A61M5/31 A61M5/315 A61M5/32 A61M5/34 B29C39/12 B29C51/14 B29C65/70 B32B1/02 B32B15/085 B32B17/10 B32B25/04 B32B25/08 B32B25/14 B32B25/16 B32B25/18 B32B25/20 B32B27/08 B32B27/28 B32B27/30 B32B27/32 B32B37/02 B32B5/18 B32B5/32 B32B7/02 B65D1/00 B65D1/40 (Advanced/Invention); A61M5/31 A61M5/32 B32B1/00 (Advanced/Non-invention)
CPC: B32B5/18 B32B25/045 B32B25/08 B32B25/18 Y10T428/24942 Y10T428/31544 Y10T428/31931 Y10T428/249981 Y10T428/249991 B32B27/08 B32B27/28 B32B2535/00 A61M5/31513 A61M2005/3118 A61M2005/3131 A61M2207/00 A61M5/3202 Y10T156/1043 Y10T428/1321 Y10T428/1352 Y10T428/1359 Y10T428/1376 Y10T428/24992 Y10T428/3154 A61K38/4846 A61K35/12 A61M2205/0238

European: A61M5/315C1 K61M207/00 K61M5/31A6B K61M5/31C1B
K61M5/32B
US: 156/221 264/259 428/212 428/218 428/304.4 428/316.6 428/319.3
428/34.7 428/35.7 428/35.9 428/36.5 428/421 428/422 428/521 604/218
604/222 604/230 604/230P

PatBase - US2011137263_AA



Family:

Publication number	Publication date	Application number	Application date
AU2010319826 AA	20110519	AU20100319826	20101029
AU2010319826 BB	20140724	AU20100319826	20101029
AU2012262718 AA	20121206	AU20120262718	20120524
AU2015204395 AA	20150806	AU20150204395	20150717
AU2015204395 BB	20170223	AU20150204395	20150717
AU2017202553 AA	20170511	AU20170202553	20170419
AU2017202553 BB	20190307	AU20170202553	20170419
AU2019204022 AA	20190627	AU20190204022	20190607
CA2778978 AA	20120425	CA20102778978	20101029
CA2778978 C	20160621	CA20102778978	20101029
CA2837378 AA	20131126	CA20122837378	20120524
CA2837378 C	20160802	CA20122837378	20120524
CA2930607 AA	20121206	CA20122930607	20120524
CN102725012 A	20121010	CN201080060456	20101029
CN102725012 B	20160106	CN201080060456	20101029
CN103702701 A	20140402	CN201280036347	20120524
CN103702701 B	20160406	CN201280036347	20120524
DE602010041327 D1	20170511	DE201060041327T	20101029
DE602010059486 D1	20190704	DE201060059486T	20101029
EP2493534 A1	20120905	EP20100776234	20101029
EP2493534 B1	20170405	EP20100776234	20101029
EP2714150 A1	20140409	EP20120726671	20120524
EP3202444 A1	20170809	EP20170161694	20101029
EP3207953 A1	20170823	EP20170161692	20101029
EP3207953 B1	20190612	EP20170161692	20101029
EP3308816 A1	20180418	EP20170195666	20101029
HK1239601 A1	20180511	HK20170113428	20171218
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HK1248628 A1	20181019	HK20180108635	20180108
IN01019KN2012 A	20130125	IN2012KN01019	20120427
IN03492KN2013 A	20140221	IN2013KN03492	20131128
JP2013509270 T2	20130314	JP20120537124T	20101029
JP2014523271 T2	20140911	JP20140513585T	20120524
JP2015091316 A2	20150514	JP20140225303	20141105
JP2016047324 A2	20160407	JP20150235130	20151201
JP2017159050 A2	20170914	JP20170074488	20170404
JP5894244 B2	20160323	JP20140225303	20141105
JP6110369 B2	20170405	JP20140513585T	20120524

US2011137263 AA	20110609	US20100915850	20101029
US2012251748 AA	20121004	US20110117573	20110527
US2016022918 AA	20160128	US20150876229	20151006
US2017173266 AA	20170622	US20170425075	20170206
US2017173267 AA	20170622	US20170425082	20170206
US8722178 BB	20140513	US20100915850	20101029
US9597458 BB	20170321	US20110117573	20110527
WO11059823 A1	20110519	WO2010US54750	20101029
WO12166515 A1	20121206	WO2012US39344	20120524

Priority:

US20090256156P	20091029	JP20120537124	20101029	JP20120537124T	20101029
EP20100776234	20101029	EP20170161692	20101029	US20100915850	20101029
WO2010US54750	20101029	US20110117573	20110527	AU20120262718	20120524
CA20122837378	20120524	JP20140513585T	20120524	JP20150235130	20120524
WO2012US39344	20120524	AU20150204395	20150717	US20150876229	20151006
CA20162837378	20160525	US20170425082	20170206	US20170425075	20170206
EP20170161692	20170317	JP20170074488	20170404	AU20170202553	20170419
HK20180100213	20180108	AU20190204022	20190607		

Probable Assignee: W L GORE AND ASSOCIATES INC

Assignee(s): (std): ASHMEAD EDGAR G ; GORE AND ASS ; GORE ENTERPRISE HOLDINGS INC ; GUNZEL EDWARD C ; MORITZ MICHAEL P ; W L GORE AND ASSOCIATES INC ; WL GORE AND ASS INC ; W L GORE AND ASS INC

Assignee(s): WL GORE AND ASSOCIATES INC NEWARK ; WL GORE AND ASSOCIATES INC ; WLGORE AND ASSOCIATES INC

Inventor(s): (std): GUNZEL EDWARD C ; ASHMEAD EDGAR G ; MORITZ MICHAEL P ; MICHAEL P MORITZ ; EDWARD C GUNZEL ; EDGAR G ASHMEAD

Inventor(s): MORITZ MICHAEL ; GUNZEL EDWARD ; ASHMEAD EDGAR

Agent(s): GRIFFITH HACK; GOWLING LAFLEUR HENDERSON LLP; GOWLING WLG CANADA LLP; SCHMITT NILSON SCHRAUD WAIBEL WOHLFROM PATENTANWAELTE PARTNERSCHAFT MBB; SHANKS ANDREW; KLUNKER SCHMITT NILSON HIRSCH; HGF LTD; HONG KONG UNITALEN INTELLECTUAL PROPERTY AGENCY LTD; AOKI ATSUSHI; ISHIDA TAKASHI; KOGA TETSUJI; AMY L; WHEATCRAFT ALLAN M ET AL; ELLIS RICHARD W ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

4) Family number: 30184056 (US2006147698A)

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Title: GARMENTS PREVENTING TRANSMISSION OF HUMAN BODY ODOR

Abstract: The invention relates to a garment that protects against liquid and/or airborne contaminants and prevents transmission of human body odor. The garment includes a moisture vapor permeable, chemical and water impermeable microporous membrane arranged to form a barrier to chemical and particulate penetration and permeation through the garment. The membrane comprises a thermoplastic polymeric resin material and an activated carbon filler material distributed throughout the membrane and functioning both as a mechanical pore-forming agent for rendering the membrane microporous, and also as an adsorbent to render the membrane odor adsorptive.

Classifications:

International (IPC 8-9): A41D31/00 B32B3/00 B32B5/18 B32B5/26

B32B5/30 B32B5/32 C08J5/18 C08J5/22 (Advanced/Invention);

A41D31/00 B32B3/00 B32B5/18 B32B5/22 (Core/Invention)

International (IPC 1-7): B32B5/18 B32B5/32 C08J5/18 C08J5/22

CPC: B32B5/26 B32B5/18 B32B5/30 B32B5/32 Y10T428/249981

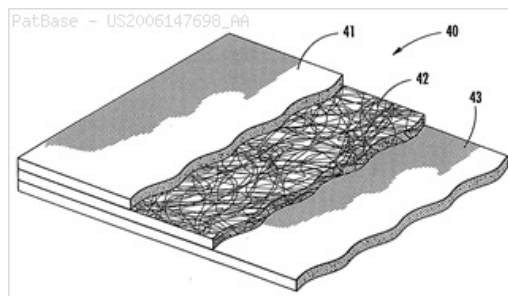
Y10T428/249986 A41D31/02 A41D31/085 A41D31/102 A41D31/265

A41D31/305

European: A41D31/00C12L A41D31/00C14L A41D31/00C2

A41D31/00C4L B32B5/18 B32B5/26 B32B5/30 B32B5/32 K41D400/22

US: 428/316.6 428/317.9



Family:

Publication number	Publication date	Application number	Application date
AU2003237989 AA	20031231	AU20030237989	20030611
CA2489362 AA	20041209	CA20032489362	20030611
EP1519982 A1	20050406	EP20030737009	20030611
US2006147698 AA	20060706	US20060363125	20060227
WO03106543 A1	20031224	WO2003US18404	20030611

Priority:

US20020388205P	20020613	US20030457636	20030609	WO2003US18404	20030611
US20060363125	20060227				

Probable Assignee: KAPPLER INC

Assignee(s): (std): CARROLL TODD R ; KAPPLER INC ; LANGLEY JOHN D

Inventor(s): (std): CARROLL TODD R ; LANGLEY JOHN D ; JOHN D LANGLEY ; TODD R CARROLL

Inventor(s): CARROLL TODD ; LANGLEY JOHN

Agent(s): SIM AND MCBURNEY; ALSTON AND BIRD LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

5) Family number: 31429106 (US2004265565A)

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Title: MICROPOROUS ARTICLE CONTAINING FLAME RETARDANT

Abstract: Microporous articles are formed by solid-liquid phase separation from a diluent in combination with a thermoplastic polymer, flame retardant and a hindered amine synergist providing novel flame retardant articles. Such articles are useful in clothing, barriers, optical films in electronic devices (such as light reflective and dispersive films), printing substrates and electrical insulation.

Classifications:

International (IPC 8-9): B29C44/00 B29C67/20 B32B27/18 B32B3/10 B32B5/22 B32B5/24 C08J5/18 C08J9/00 C08J9/28 C08K5/00 C08K5/06 C08K5/3435 (Advanced/Invention); B29C44/56 C08J9/00 C08K5/00 C08K5/06 C08K5/3435 (Advanced/Non-invention);

B29C44/00 B29C67/20 B32B27/18 B32B3/10 B32B5/22 C08J5/18 C08J9/00 C08K5/00 (Core/Invention); B29C44/34 (Core/Non-invention)

International (IPC 1-7): B29C44/00 B32B3/10 B32B3/26 C08J5/18 C08J9/00 C08J9/28 C08K5/00 C08K5/06 C08K5/3435

CPC: B29C44/5627 B29C67/202 B32B5/22 C08J5/18 C08J2201/052 C08J2323/12 C08K5/0066 Y10T428/249981 Y10T428/249986 Y10T428/249991 C08K5/06 C08K5/3435 B32B5/24 B32B3/26 B32B37/153 B32B2307/3065 B32B2307/7265 B32B27/18 C08J9/28

European: B29C67/20C B32B27/18 B32B5/22 C08J5/18 C08J9/28 C08K5/00P8 C08K5/00P8+L23 C08K5/06 C08K5/06+L23 C08K5/3435 C08K5/3435+L23 L29C44/56F M08J201/052 M08J323/12

US: 428/316.6 428/316.600S 428/317.9 428/317.900P 428/319.3 428/319.300S

종류	% DE-79	% NOR-116	% 이프가닉스	% 미네랄-오일
	난연제	상승제	황산화제	피복제
C1	0	0	0	37.5
C2	2.5	0	0	39
C3	5.5	0	0	36
C4	8.5	0	0	33
1	2.5	0.25	0	38.75

Family:

Publication number	Publication date	Application number	Application date
BRPI0411963 A	20060829	BR2004PI11963	20040527
EP1639036 A2	20060329	EP20040776125	20040527
JP2007518832 T2	20070712	JP20060517146T	20040527
KR20060030487 A	20060410	KR20057025295	20040527
MXPA05013638 A1	20060310	MX2005PA13638	20040527
US2004265565 A2	20041230	US20030609808	20030630
WO05005526 A2	20050120	WO2004US16564	20040527
WO05005526 A3	20050616	WO2004US16564	20040527

Priority:

US20030609808 20030630 WO2004US16564 20040527

Probable Assignee: 3M CO

Assignee(s): (std): 3M CO ; 3M INNOVATIVE PROPERTIES CO ; 3M INNOVATIVE PROPERTIES COMPANY

Assignee(s): FISCHER PATRICK J ; FLOYD ROBERT M

Inventor(s): (std): ROBERT M FLOYD ; PATRICK J FISCHER ; FLOYD ROBERT M ; FISCHER PATRICK J

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

6) Family number: 11149123 (US5208098A)

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Title: SELF-BONDED NONWOVEN WEB AND POROUS FILM COMPOSITES

Abstract: A self-bonded nonwoven web and porous film composite comprising at least one layer of a self-bonded, fibrous nonwoven web comprising substantially continuous filaments adhered to at least one layer of a polymeric porous film and having vapor-permeable and liquid-impermeable properties.

Classifications:

International (IPC 8-9): B32B27/12 D04H13/00

E04D12/00 (Advanced/Invention);

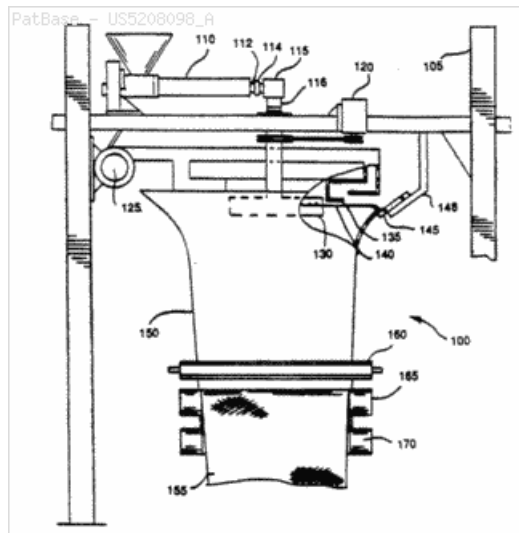
B32B27/12 D04H13/00 E04D12/00 (Core/Invention)

International (IPC 1-7): B32B27/34

CPC: Y10T428/24603 Y10T428/24612 Y10T442/678 B32B27/12 B32B5/022 B32B7/12 B32B2305/026 B32B2305/20 B32B2307/724 B32B2307/7265 B32B2323/10 B32B2607/02 E04D12/002

European: B32B27/12 D04H13/00B2 D04H13/00B5 E04D12/00B

US: 428/171 428/172 428/284 428/287 428/296 428/297 428/298 442/398



Family:

Publication number	Publication date	Application number	Application date
US5208098 A	19930504	US19900601519	19901023

Priority:

US19900601519 19901023

Probable Assignee: PROPEX OPERATING CO LLC

Assignee(s): (std): AMOCO CORP

Assignee(s): BNP PARIBAS ADMINISTRATIVE AGENT AS ; BNP PARIBAS AS ADMINISTRATIVE AGENT ; BP AMOCO CORP ; BP NORTH AMERICA INC CORP ; PROPEX FABRICS INC ; PROPEX OPERATING CO ; PROPEX INC ; PROPEX OPERATING CO LLC ; HSBC BANK USA NATIONAL ASSOCIATION AGENT AS ; AMOCO A CORP OF IN CORP

Inventor(s): (std): STOVER WALTER H

7) Family number: 31304195 (US2005003151A)

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Title: EXTRUDED POLYPROPYLENE SHEETS CONTAINING BETA SPHERULITES

Abstract: An improved extruded polypropylene sheet that contains a high level of beta crystallinity and a process for making such sheets are disclosed herein. The polypropylene sheet contains at least one layer of a resinous polymer of propylene and an effective amount of beta spherulites. The beta spherulites in the sheet are produced by the incorporation of a beta nucleating agent in the polymer. The presence of the beta spherulites in the sheet facilitates the process of post-stretching the perforated sheet to produce a uniaxially or biaxially oriented mesh structure, and also broadens the temperature range over which this stretching can be performed. The final mesh has a lower density than a polypropylene mesh without beta spherulites. The perforated beta nucleated sheet also exhibits different stretching characteristics during the orientation steps such that more resinous polymer is drawn out of the node junction region between the machine direction and transverse direction oriented strands and a greater percentage of the web area has a solid polymer structure. This altered stretching behavior results in an oriented web that has higher strength and torsional rigidity characteristics. Thus lighter weight mesh structures which meet all of the physical property requirements for end-use applications, such as reinforcing grids to stabilize concrete and soil in civil engineering and landfill applications, are produced. The lighter weight extruded beta nucleated sheet can also be stretched at higher line speeds, thereby reducing the manufacturing costs.

Classifications:

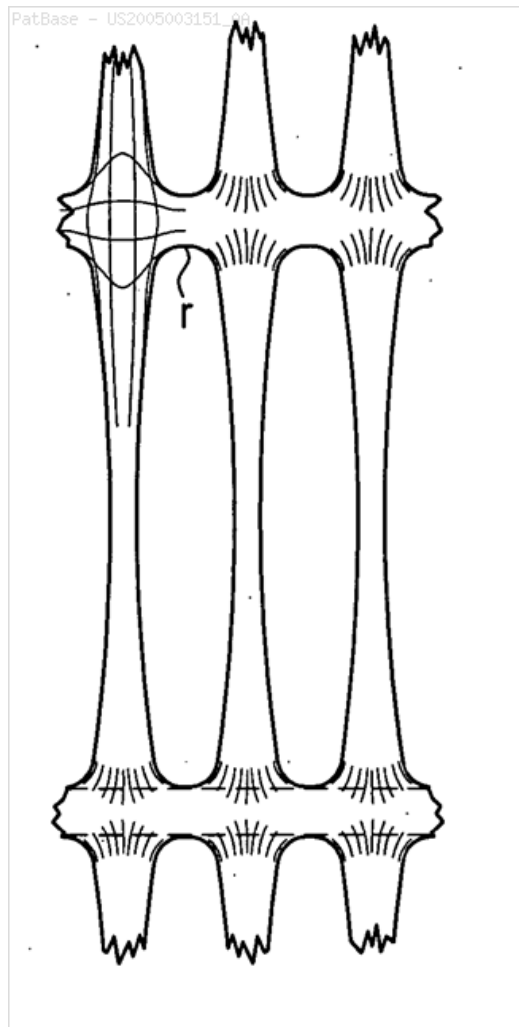
International (IPC 8-9): B29C47/00 B29C55/14 B29D28/00 B29D7/01 B32B27/08 B32B27/32 B32B3/10 B32B7/02 B65D71/00 C08F110/00 C08J5/18 C08J9/00 (Advanced/Invention); B29C47/06 C08F110/06 (Advanced/Non-invention); B29C47/00 B29C55/14 B29D28/00 B29D7/00 B32B27/08 B32B27/32 (Core/Invention); B29C47/06 C08F110/00 (Core/Non-invention)

International (IPC 1-7): B32B3/10 B32B7/02 B65D71/00 C08F110/00 C08J9/00 C08L1/00

CPC: C08J3/226 C08J2323/10 C08J2423/00 Y10S428/91 Y10T428/24273 Y10T428/24314 C08J5/18 C08J2323/14 B32B27/32 B32B27/08 B32B2250/242 B32B2307/514 B32B2307/516 B32B2307/518 C08K5/0083 C08K5/3437 C08L23/12 C08L23/142 C08L23/10 C08L2205/02 C08L2205/242 Y10T428/1352 B29C48/07 B29C48/21 B29C48/30 B29C48/307 B29C55/14 B29D7/01 B29D28/00 B29K2023/12 C08F110/06 B29C48/08

European: B29C55/14 B29D28/00 B29D7/01 B32B27/08 B32B27/32 C08J3/22L C08J5/18 C08L23/10 C08L23/12 C08L23/14A L29C47/00J4 L29C47/00J5 L29C47/06P L29C47/14B L29K23/12 L32B250/24A L32B307/514 L32B307/516 L32B307/518 M08F110/06 M08J323/10 M08J323/14 M08J423/00 M08K5/00P10 M08K5/3437 M08L205/02 M08L205/242 M08L23/10 M08L23/12 M08L23/14A

US: 264/145 264/145S 428/131 428/131P 428/136 428/220 428/220P 428/35.7 428/35.700P 428/910 524/543 524/543S 524/87 524/87P 524/99 524/99S



Family:

Publication number	Publication date	Application number	Application date
CN100560439 C	20091118	CN200480000089	20040415
CN1697765 A	20051116	CN200480000089	20040415
EP1620326 A1	20060201	EP20040759870	20040415
EP1620326 A4	20070613	EP20040759870	20040415
EP1620326 B1	20081210	EP20040759870	20040415
US2005003151 AA	20050106	US20040824730	20040415
US2005043447 AA	20050224	US20040919539	20040817
US2006177632 AA	20060810	US20050053519	20050208
US2007172613 AA	20070726	US20060599815	20061115
US2009258212 AA	20091015	US20090492871	20090626
US7407699 BB	20080805	US20040824730	20040415
WO04094259 A1	20041104	WO2004US11579	20040415
WO06023442 A1	20060302	WO2005US28981	20050816

Priority:

US20030463751P 20030416	US20040824730 20040415	WO2004US11579 20040415
US20040919539 20040817	US20050053519 20050208	US20060599815 20061115
US20090492871 20090626		

Probable Assignee: MAYZO INC

Assignee(s): (std): JACOBY PHILIP ; MAYZO INC

Inventor(s): (std): JACOBY PHILIP ; PHILIP JACOBY

Agent(s): BROWN FRASER GREGORY JAMES ET AL; PATREA L PABST PABST PATENT GROUP LLP; NEEDLE AND ROSENBERG PC; BALLARD SPAHR ANDREWS AND INGERSOLL LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Abstract: The invention relates to the use of a multilayer, biaxially oriented polyolefin film comprising at least five layers as the label in deep drawing, which film is constructed from the following layers I the base layer is free from vacuoles, and IIa the outer intermediate layer is free from vacuoles and contains at least 95 percent by weight propylene polymer, which polymer has a propylene content of 98 to 100 percent by weight relative to the propylene polymer, and IIIa printing may be applied to the outer cover layer, and IIB the inner intermediate layer is constructed essentially from propylene polymer and contains vacuoles, and IIIB the inner cover layer is applied to the surface of the inner intermediate layer and is a sealable cover layer, and is a sealable cover layer, and has a sealing initiation temperature <130 degrees centigrade

Classifications:

International (IPC 8-9): B29C51/10 B29C51/16 B29C55/02 B29C55/14 B32B27/06 B32B27/08 B32B27/16 B32B27/18 B32B27/20 B32B27/32 B32B3/10 B32B3/26 B32B7/12 G09F3/04 (Advanced/Invention); B29C49/04 B29C49/24 B29K23/00 B29L31/00 (Advanced/Non-invention); B29C51/00 B29C55/02 B32B27/06 B32B27/18 B32B27/32 G09F3/04 (Core/Invention)
CPC: B29C55/023 B29C49/04 B29C49/24 B29C51/10 B29C51/16 B29C55/143 B29C2049/2412 B29C2791/006 B29C2791/007 B29K2023/06 B29K2023/0625 B29K2023/0633 B29K2023/0641 B29K2023/065 B29K2023/083 B29K2023/12 B29K2423/065 B29L2031/744 B32B7/12 B32B27/08 B32B27/16 B32B27/18 B32B27/32 B32B2264/0264 B32B2264/0278 B32B2264/102 B32B2264/104 B32B2307/21 B32B2307/31 B32B2307/406 B32B2307/41 B32B2307/414 B32B2307/518 B32B2307/72 B32B2307/746 B32B2307/75 B32B2439/00 B32B2519/00 Y10T428/24802 Y10T428/249983
European: B29C51/16 B29C55/02B B29C55/14B B32B27/32 L29C49/04 L29C49/24 L29C49/24C1 L29C51/10 L29C791/00E4 L29C791/00E6 L29K23/06 L29K23/06B3 L29K23/06B5 L29K23/06B7 L29K23/06B9 L29K23/08B L29K23/12 L29K423/06B9 L29L31/744
US: 1/1 264/259 264/259S 428/195.1 428/195.100P 428/317.3 428/317.300S

Family:

Publication number	Publication date	Application number	Application date
AU2010205815 AA	20100722	AU20100205815	20100113
AU2010205815 BB	20141113	AU20100205815	20100113
CA2749873 AA	20100722	CA20102749873	20100113
CA2749873 C	20170822	CA20102749873	20100113
CN102282003 A	20111214	CN201080004582	20100113
CN102282003 B	20150812	CN201080004582	20100113
DE102009005137 A1	20100722	DE200910005137	20090115
DE502010001754 D1	20130124	DE201050001754T	20100113
EP2387493 A1	20111123	EP20100701198	20100113
EP2387493 B1	20121128	EP20100701198	20100113
ES2397872 T3	20130312	ES20100701198T	20100113
MX2011007533 A1	20110812	MX20110007533	20100113
US2011268934 AA	20111103	US20100143958	20100113
US9446554 BB	20160920	US20100143958	20100113
WO10081682 A1	20100722	WO2010EP00134	20100113

Priority:

DE200910005137 20090115 EP20100701198 20100113 WO2010EP00134 20100113

Probable Assignee: TREFAN GERMANY GMBH AND CO KG

Assignee(s): (std): DUEPRE YVONNE ; TEWS WILFRID ; TREFAN GERMANY GMBH AND CO ; TREFAN GERMANY GMBH AND CO KG

Assignee(s): TREFAN GERMANY GMBH AND COKG

Inventor(s): (std): TEWS WILFRID ; DUEPRE YVONNE ; WILFRID TEWS ; YVONNE DUPRE ; DUPRE YVONNE

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; FETHERSTONHAUGH AND CO; LUDERSCHMIDT SCHUELER AND PARTNER; MAI DOERR BESIER; ZUAZO ALEXANDER; DRINKER BIDDLE AND REATH LLP; KREMER VIOLA

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

9) Family number: 49612209 (US2013017430A)

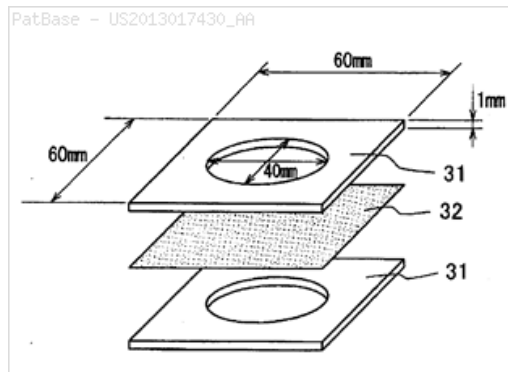
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Title: POLYOLEFIN RESIN POROUS FILM AND BATTERY SEPARATOR

Abstract: As an object of the present invention, to provide a polyolefin resin porous film fulfilling high continuity, excellent dimensional stability and shutdown function which closes the pores sensitively and completely in a temperature range of 120 to 140 degrees centigrade without closing the pores at less than 120 degrees centigrade The present invention relates to a polyolefin resin porous film having at least one layer each of a layer comprising as the main component a polypropylene resin composition (A) and a layer comprising as the main component a polyethylene resin composition (B) fulfilling the condition (i) the melting point of the polyethylene resin composition (B) is 130 degrees centigrade or higher, and the condition (ii) the melt flow rate (MFR) of the polyethylene resin composition (B) is 2.0 to 15 g/10 minutes.

Classifications:

International (IPC 8-9): B32B27/08 B32B27/32 B32B3/26 B32B5/18 B32B5/32 H01M2/16 (Advanced/Invention)
CPC: H01M2/1686 H01M2/1653 Y10T428/264 B32B27/08 B32B2307/734 Y10T428/249981 B32B27/32
European: B32B27/32 B32B5/32 H01M10/052 H01M10/0566 H01M2/16C3
US: 428/316.6 428/334 428/335 429/144



Family:

Publication number	Publication date	Application number	Application date
■ CN102791485 A	20121121	CN201180013341	20110315
■ EP2548736 A1	20130123	EP20110756302	20110315
■ EP2548736 A4	20140514	EP20110756302	20110315
■ JP2011194650 A2	20111006	JP20100062202	20100318
■ KR20120104425 A	20120920	KR20127020764	20110315
■ US2013017430 AA	20130117	US20110635758	20110315
■ WO11115117 A1	20110922	WO2011JP56070	20110315

Priority:

JP20100062202 20100318 WO2011JP56070 20110315

Probable Assignee: MITSUBISHI PLASTICS INC

Assignee(s): (std): MITSUBISHI PLASTICS INC ; MITSUBISHI PLASTICS IND ; TERAKAWA TORU ; USAMI YASUSHI ; YAMADA TAKEYOSHI

Inventor(s): (std): TERAKAWA TORU ; USAMI YASUSHI ; YAMADA TAKEYOSHI ; YAMADA TAKEMIKI ; TAKEYOSHI YAMADA ; YASUSHI USAMI ; TORU TERAKAWA

Agent(s): Gille Hrabal; TAKEUCHI ICHIZAWA AND ASSOCIATES

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

10) Family number: 23352239 (US2002071944A)

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Title: BREATHABLE COMPOSITE AND METHOD THEREFOR

Abstract: This invention provides breathable composite materials with good liquid barrier properties comprising a laminate of a nonwoven web layer and a breathable film layer wherein breathability of the composite is provided by a plurality of point-like deformations of the film layer. In one embodiment, the composites also have a soft, cloth-like texture at at least one surface thereof. Also provided is a process for making such composites comprising applying a molten film-forming resin composition capable of developing breathability on deformation to a nonwoven web, cooling the molten composition to form a coated web having a web layer bonded to a film layer, and subjecting the coated web to heat and pressure at a plurality of points on a surface thereof wherein the heat, pressure and density of, and proportion of the composite surface occupied by, the deformations are effective to impart breathability to the film without loss of liquid barrier properties. In another embodiment of the process, web and cast film components are subjected to heat and pressure at a plurality of points to bond the film and the web and provide a plurality of point-like deformations of the film layer, thereby imparting breathability without loss of liquid barrier properties.

Classifications:

International (IPC 8-9): A61F13/15 B32B27/12 B32B37/00 B32B38/04 B32B38/06 B32B5/16 D04H13/00 (Advanced/Invention); A61F13/15 B32B37/15 (Advanced/Non-invention)

International (IPC 1-7): A61F13/15 B32B27/12 B32B27/20 B32B3/00 B32B31/00 B32B5/18 D04H13/00

CPC: Y10T428/24802 Y10T428/2481 Y10T428/24826 A61F13/514 Y10T442/2139 Y10T442/2164 Y10T442/674 Y10T442/678 D04H1/4291 D04H3/007 B32B27/32 B32B2262/0253 B32B27/12 B32B37/153 B32B38/06 B32B2305/20 B32B2307/724 B32B2307/7265

European: B32B27/12 B32B31/00D4B B32B38/06 D04H13/00B5 K61F13/514 L32B305/20 L32B307/724 L32B307/726B L32B31/30 L32B37/15B

US: 428/195 428/195.1 428/195.100S 428/196 428/196S 428/198 428/198P 442/394 442/394S 442/398 442/398S 442/76 442/76S 442/79 442/79S

Family:

Publication number	Publication date	Application number	Application date
■ AT468970 E	20100615	AT19990918725T	19990421
■ CA2328909 AA	20001017	CA19992328909	19990421
■ CA2328909 C	20070206	CA19992328909	19990421
■ DE69942415 D1	20100708	DE19996042415	19990421
■ DK1079970 T3	20100816	DK19990918725T	19990421
■ EP1079970 A1	20010307	EP19990918725	19990421
■ EP1079970 B1	20100526	EP19990918725	19990421
■ EP1079970 B9	20110105	EP19990918725	19990421
■ ES2345860 T3	20101004	ES19990918725T	19990421
■ MXPA00010335 A1	20020621	MX2000PA10335	19990421

PT1079970 T	20100721	PT19990918725T	19990421
US2002071944 AA	20020613	US19990294947	19990420
US6506695 BB	20030114	US19990294947	19990420
WO9954134 A1	19991028	WO1999US08683	19990421

Priority:

US19980082514P 19980421 US19990294947 19990420 WO1999US08683 19990421

Probable Assignee: RKW SE

Assignee(s): (std): RHEINISCHE KUNSTSTOFFWERKE GM ; RKW SE ; BP AMOCO CORP

Assignee(s): BP NORTH AMERICA INC CORP ; GARDNER HUGH C ; RKW RHEINISCHE KUNSTSTOFFWERKE AG ; RKW US INC ; PFG US INC ; RHEINISCHE KUNSTSTOFFWERKE GMBH ; RHEINISCHE KUNSTSTOFFWERKE GMBH ; LUI KAM C ; MUMM JEFFREY H ; RKW AG

Inventor(s): (std): GARDNER HUGH C ; MUMM JEFFREY H ; LUI KAM C ; MUMM JEFFREY ; LUI KAM ; GARDNER HUGH

Inventor(s): JEFFREY H MUMM ; HUGH C GARDNER ; KAM C LUI

Agent(s): FETHERSTONHAUGH AND CO; WAGNER JUTTA

Designated states: AT BE CA CH CY DE DK ES FI FR GB GR IE IT LI LU MC MX NL PT SE

11) Family number: 33086305 (US2008182933A)

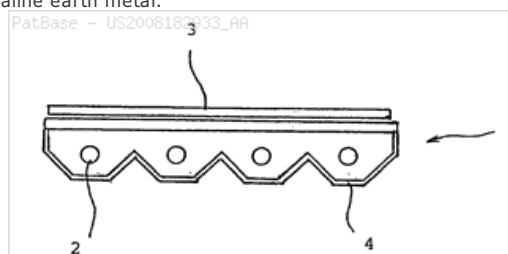
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Title: FILLER FOR POROUS FILM AND POROUS FILM CONTAINING THE SAME

Abstract: A filler for porous films is provided which is easy to be mixed with a resin, has good dispersibility in a resin, and provides a porous film useful for a light reflector of, for example, a liquid crystal display and a lighting apparatus and a porous film useful for a diaphragm (separator) between electrodes of a battery. A filler comprises inorganic particles surface treated with a surfactant (A) and a compound (B) having a chelating function to an alkaline earth metal.

Classifications:

International (IPC 8-9): C08J9/00 C08K3/24 A61K9/16 C08J5/18 C08K9/00 C08K9/04 C08L101/00 C08L23/00 C09C1/02 C09C3/08 G02B5/08 G02F1/1335 G02F1/13357 (Advanced/Invention); C08J5/18 C08K9/04 (Advanced/Non-invention); A61K9/16 C08J5/18 C08J9/00 C08K9/00 C08L101/00 C08L23/00 C09C1/02 C09C3/08 G02F1/13 (Core/Invention)
CPC: B01D69/148 B29C55/005 B29K2023/12 B29K2105/04 B29K2105/16 H01M2/166 H01M10/052 G02F1/133605 C08K9/04
European: B01D69/14B16 B29C55/00B H01M2/16C5 L29K105/04 L29K105/16 L29K23/12 M08K9/04 S02F1/1336B3 T01M10/052 Y02E60/12
US: 524/543



Family:

Publication number	Publication date	Application number	Application date
CN101080453 A	20071128	CN200580043436	20051209
CN101080453 B	20110928	CN200580043436	20051209
JP2006169421 A2	20060629	JP20040365544	20041217
JP2006265472 A2	20061005	JP20050089057	20050325
JP5027385 B2	20120919	JP20040365544	20041217
JP5100972 B2	20121219	JP20050089057	20050325
KR101208339 B1	20121205	KR20077014122	20051209
KR20070086514 A	20070827	KR20077014122	20051209
TW200736316 A	20071001	TW20060111475	20060331
TWI394783 B	20130501	TW20060111475	20060331
US2008182933 AA	20080731	US20050792523	20051209
WO06064729 A1	20060622	WO2005JP22649	20051209

Priority:

JP20040365544 20041217 JP20050089057 20050325 WO2005JP22649 20051209
TW20060111475 20060331

Probable Assignee: MARUO CALCIUM CO LTD

Assignee(s): (std): EHARA SHOJI ; MARUO CALCIUM ; SHIMIZU SEIYA ; NAGAMATSU MAKOTO ; SHIBATA HIROSHI

Assignee(s): MARUO CALCIUM CO ; MARUO CALCIUM CO LTD ; MARUO CALCIUM COMPANY LIMITED ; MARUO CALCIUM COMPANY LTD

Inventor(s): (std): EBARA SHOJI ; SEIYA SHIMIZU ; SHOJI EHARA ; HIROSHI SHIBATA ; MAKOTO NAGAMATSU ; EHARA SHOJI ; SHIBATA HIROSHI ; NAGAMATSU MAKOTO ; SHIMIZU SEIYA

Agent(s): KRATZ QUINTOS AND HANSON LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT KE KG KM KN KP KR KZ LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

12) Family number: 3820396 (US4386129A)

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Title: POROUS POLYMERIC FILMS

Abstract: This invention relates to porous films having pores with polygonal cross sections and average pore diameters of about 3 to about 100 microns and the method for preparing these films. More particularly this invention relates to a porous film having

pores with polygonal cross sections and average pore diameters of about 3 to about 100 microns formed from a resinous polymer of propylene and the process for forming the film which comprises the steps of (a) forming a film containing beta-spherulites and (b) selectively extracting the beta-spherulites.

Classifications:

International (IPC 8-9): B29C67/20 C08J5/18

C08J9/26 (Advanced/Invention);

B29C67/20 C08J5/18 C08J9/00 (Core/Invention)

International (IPC 1-7): B28B3/20 B32B27/32 B32B7/02

CPC: C08J9/26 B29C67/202 C08J5/18 C08J2201/0424 C08J2323/10

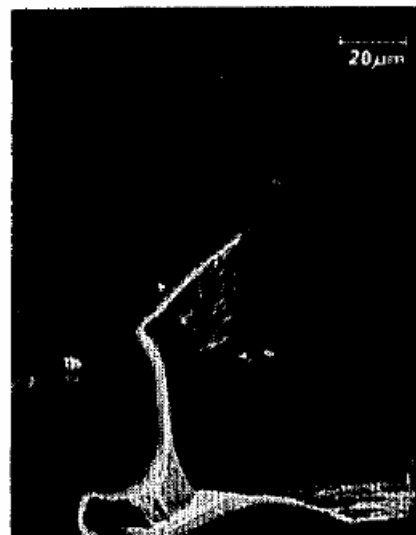
Y10T428/24967 Y10T428/31938

European: B29C67/20C C08J5/18 C08J9/26 M08J201/0424 M08J323/10

US: 264/176R 264/344 264/49 428/215 428/220 428/523 521/56 521/63

521/90 521/94 526/348 526/351

PatBase - US4386129_A



Family:

Publication number	Publication date	Application number	Application date
US4386129 A	19830531	US19810249673	19810331

Priority:

US19810249673 19810331

Probable Assignee: STANDARD OIL CO INDIANA

Assignee(s): (std): STANDARD OIL CO INDIANA

Assignee(s): STANDARD OIL CO INDIANA A CORP OF IN ; STANDARD OIL COMPANY INDIANA ; STANDARD OIL CO ; STANDARD OIL CO (INDIANA) A CORP OF IN

Inventor(s): (std): JACOBY PHILIP

13) Family number: 5226437 (US5169712A)

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Title: POROUS FILM COMPOSITES

Abstract: A porous film composite comprising at least one layer of an oriented polymeric porous film comprising an ethylene-propylene block copolymer having an ethylene content of about 10 to about 50 wt percent, a polypropylene homopolymer or random copolymer of propylene having up to about 10 wt percent of a comonomer of ethylene or an alpha -olefin of 4 to 8 carbon atoms, and at least one component selected from a low molecular weight polypropylene, a beta-spherulite nucleating agent and calcium carbonate adhered to at least one layer of a polymeric foam product, a woven fabric, or a nonwoven fabric such as a carded web of staple fibers, a spunbond fabric, meltblown fabric and a self-bonded, fibrous, nonwoven web.

Classifications:

International (IPC 8-9): B32B5/22 C08L23/10 C08L53/00 D04H13/00 D06N3/00 D06N3/04 (Advanced/Invention);

B32B5/22 C08L23/00 C08L53/00 D04H13/00 D06N3/00 (Core/Invention)

International (IPC 1-7): B32B27/00 B32B3/26 B32B5/22 D04H1/58

CPC: Y10S428/903 B32B5/22 C08L23/10 C08L23/12 C08L23/142 C08L23/16 C08L53/00 C08L2205/02 C08L2205/03

C08L2205/242 D06N3/0063 D06N3/0065 D06N3/007 Y10T428/249978 Y10T428/249981 Y10T428/249986 Y10T428/249988

Y10T428/249993 Y10T442/3358 Y10T442/3707 Y10T442/3854 Y10T442/674 Y10T442/68 Y10T442/681 B32B27/12 B32B5/022

B32B5/024 B32B5/18 B32B7/12 B32B27/065 B32B27/32 B32B2266/025 B32B2270/00 B32B2305/026 B32B2323/043

B32B2323/046 B32B2323/10 B32B2419/00 D06N3/045

European: B32B5/22 C08L23/10 C08L53/00 D04H13/00B5 D06N3/00E6 D06N3/00E8 D06N3/00F D06N3/04D M08L205/02

M08L205/03 M08L205/242 M08L23/12 M08L23/14A M08L23/16

US: 428/315.5 428/316.6 428/317.9 428/318.6 428/319.9 428/903 442/225 442/268 442/286 442/394 442/400 442/401

Family:

Publication number	Publication date	Application number	Application date
US5169712 A	19921208	US19910749215	19910823

Priority:

US19910749215 19910823

Probable Assignee: RKW SE

Assignee(s): (std): AMOCO CORP

Assignee(s): BP AMOCO CORP ; BP NORTH AMERICA INC CORP ; PFG US INC ; RHEINISCHE KUNSTSTOFFWERKE GMBH ; RKW AG ; RKW SE ; RKW RHEINISCHE KUNSTSTOFFWERKE AG ; AMOCO A OF INC CORP

Inventor(s): (std): TAPP WILLIAM T

Title: LAMINATED POROUS FILM FOR SEPARATOR

Abstract: Disclosed is a laminated porous film for a separator of a battery that, while having excellent air permeation performance which contributes to electric performance, has a shutdown property which is one of properties important from the viewpoint of ensuring safety. The laminated porous film is characterized in that the laminated porous film comprises layer A formed of a porous layer composed mainly of a polypropylene resin and layer B formed of a porous layer composed mainly of a polyethylene resin, has a beta -activity, and has an electric resistance of not more than 100 at 25 degrees centigrade and an electric resistance of not less than 1000 after heating at 135 degrees centigrade for 5 seconds and/or an air permeability of not more than 1000 sec/100 ml at 25 degrees centigrade and an air permeability of not less than 10000 sec/100 ml after heating at 135 degrees centigrade for 5 seconds.

Classifications:

International (IPC 8-9): B29C55/12 B32B27/08 B32B27/18 B32B27/20 B32B27/32 B32B3/26 B32B37/14 B32B5/32 C08J9/00 C08L23/12 H01M10/052 H01M2/14 H01M2/16 (Advanced/Invention);

B32B27/32 C08L23/12 H01M2/16 (Advanced/Non-invention);

B32B27/32 B32B5/22 C08J9/00 H01M2/16 (Core/Invention)

CPC: H01M2/1653 B32B27/08 B32B27/18 B32B27/205 B32B2307/518

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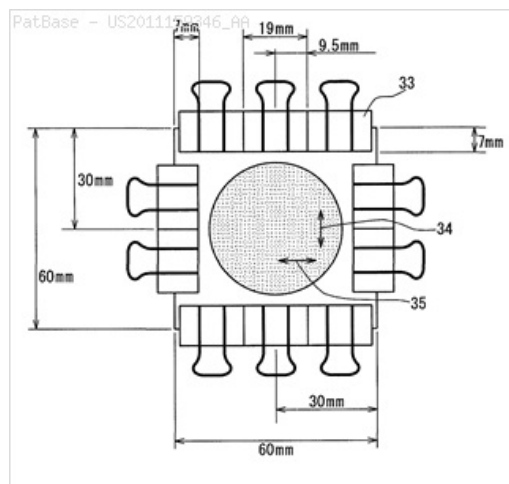
B32B27/32

European: B32B27/08 B32B27/18 B32B27/20A B32B27/32 H01M2/14M

H01M2/16C3 H01M2/16L L32B307/518 L32B457/10 T01M10/052

Y02E60/12

US: 156/229 156/229S 428/304.4 428/304.400S 429/144 429/144P



Family:

Publication number	Publication date	Application number	Application date
CN102171855 A	20110831	CN200980139069	20090901
CN103311484 A	20130918	CN201310154246	20090901
EP2337114 A1	20110622	EP20090811480	20090901
EP2337114 A4	20120125	EP20090811480	20090901
EP2337114 B1	20161102	EP20090811480	20090901
IN02397DN2011 A	20120330	IN2011DN02397	20110401
JP2010061973 A2	20100318	JP20080226081	20080903
JP2010061974 A2	20100318	JP20080226120	20080903
JP2010120217 A2	20100603	JP20080294454	20081118
JP4801705 B2	20111026	JP20080226081	20080903
JP4801706 B2	20111026	JP20080226120	20080903
JP4801717 B2	20111026	JP20080294454	20081118
KR101211978 B1	20121213	KR20117007674	20090901
KR20110063656 A	20110613	KR20117007674	20090901
US2011159346 AA	20110630	US20090061868	20090901
WO10026954 A1	20100311	WO2009JP65231	20090901

Priority:

JP20080226081 20080903 JP20080226120 20080903 JP20080294454 20081118
WO2009JP65231 20090901

Probable Assignee: MITSUBISHI PLASTICS INC

Assignee(s): (std): MITSUBISHI PLASTICS INC ; NEMOTO TOMOYUKI ; YAMAMOTO MIHO ; YAMADA TAKEYOSHI ; ARAI HIDETAKA ; KATSUHARA KAZUNARI ; MITSUBISHI PLASTICS IND

Assignee(s): KATSUHARA KAZUNARI ; ARAI HIDETAKA ; YAMADA TAKEYOSHI ; NEMOTO TOMOYUKI ; YAMAMOTO MIHO

Inventor(s): (std): KATSUHARA KAZUNARI ; ARAI HIDETAKA ; NEMOTO TOMOYUKI ; YAMADA TAKEYOSHI ; YAMAMOTO MIHO ; USAMI YASUSHI ; HIRUMA TAKASHI ; YAMADA TAKEMIKI ; TAKAGI JUN ; TAKEYOSHI YAMADA ; TOMOYUKI NEMOTO ; HIDETAKA ARAI ; KAZUNARI KATSUHARA ; MIHO YAMAMOTO

Inventor(s): KATSUHARA KAZUNARI ; ARAI HIDETAKA ; YAMADA TAKEYOSHI ; NEMOTO TOMOYUKI ; YAMAMOTO MIHO ; HIDETAKA ARAI

Agent(s): HAYES ADRIAN CHETWYND; BOULT WADE TENNANT; OWADA KAZUMI

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: MILDEW-RESISTANT SEALING COMPOUND FORMULATIONS CONTAINING A BENZOTHIOPHENE-2-CY-CLOHEXYLCARBOXAMIDE-S,S-DIOXIDE

Abstract: The invention relates to mildew-resistant sealing compounds, in particular with a base of silicone, urethane and/or an acrylic base, which contain a benzothiophene-2-cyclohexylcarboxamide-S,S-dioxide.

Classifications:

International (IPC 8-9): A01N43/12 C08K5/00 C08K5/45 C08L101/00 C08L33/08 C08L75/04 C08L83/04 (Advanced/Invention); A01N43/02 C08K5/00 C08L101/00 C08L33/00 C08L75/00 C08L83/00 (Core/Invention)

International (IPC 1-7): B32B27/00 B32B27/30 B32B27/40 C08K5/00 C08K5/36 C08K5/45 C08L101/00 C08L33/08 C08L75/04 C08L83/04 C09K3/10

CPC: Y10T428/31551 Y10T428/31663 Y10T428/31938 C08K5/45 A01N43/12

European: A01N43/12 C08K5/45

US: 428/423.1 428/423.100P 428/447 428/447S 428/523 428/523S 523/122 523/122S

Family:

Publication number	Publication date	Application number	Application date
AT364658 E	20070715	AT20020760219T	20020703
AU2002327335 AA	20030129	AU20020327335	20020703
CA2453392 AA	20040108	CA20022453392	20020703
DE10133545 A1	20030206	DE20011033545	20010711
DE50210320 D1	20070726	DE20025010320	20020703
EP1412426 A2	20040428	EP20020760219	20020703
EP1412426 B1	20070613	EP20020760219	20020703
JP2004534139 T2	20041111	JP20030512306T	20020703
PL373734 A1	20050905	PL20020373734	20020703
US2005003205 AA	20050106	US20040483357	20040713
WO03006543 A2	20030123	WO2002EP07320	20020703
WO03006543 A3	20030501	WO2002EP07320	20020703

Priority:

DE20011033545 20010711 WO2002EP07320 20020703

Probable Assignee: BAYER AG

Assignee(s): (std): AUGUSTIN THOMAS ; BAYER AG ; GE BAYER SILICONES GMBH AND CO ; WACHTLER PETER ; PUTZER MARKUS ALEXANDER ; PREUSS KRYSTYNA

Assignee(s): MOMENTIVE PERFORMANCE MATERIALS GMBH ; GE BAYER SILICONES GMBH AND CO KG ; GE BAYER SILICONES GMBH AND COKG ; LANXESS DEUTSCHLAND GMBH ; BAYER AKTIENGESellschaft ; GE BAYER SILICONES GMBH

Inventor(s): (std): WACHTLER PETER ; PUTZER MARKUS ALEXANDER ; AUGUSTIN THOMAS ; PREUSS KRYSTYNA ; PUTZER MARKUS

Inventor(s): PETER WACHTLER ; KRYSTYNA PREUSS ; MARKUS ALEXANDER PUTZER ; THOMAS AUGUSTIN

Agent(s): FETHERSTONHAUGH AND CO; NORRIS MCLAUGHLIN AND MARCUS

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

16) Family number: 42857525 (US2010326590A)

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Title: LABEL FILM FOR DEEP-DRAW PROCESSES

Abstract: The invention relates to the use of a multilayered, opaque, biaxially oriented polyolefin film of a vacuole-containing base layer and at least one inner cover layer comprising at least 30-95 percent by weight of a copolymer and/or terpolymer I having a seal initiation temperature I of 70-105 degrees centigrade and 5 to 70 percent by weight of an incompatible polyethylene, each of the specifications in percent by weight being based on the weight of the inner cover layer and the inner cover layer having a seal initiation temperature II of 80 to 110 degrees centigrade

Classifications:

International (IPC 8-9): B29C51/16 B32B27/08 B32B27/32 B32B3/26 B32B5/18 C08J5/18 C08L23/10 C09J7/02 G09F3/04 (Advanced/Invention);

B29C51/10 B29K23/00 (Advanced/Non-invention);

B29C51/00 B32B27/32 G09F3/04 (Core/Invention);

B29C B32B G09F (Subclass/Invention)

CPC: B32B9/02 B32B9/045 B32B2307/72 Y10T156/1028 Y10T428/24355

B29C51/16 B29C51/10 B29C2791/006 B29K2023/0625 B29K2023/0633

B29K2023/0641 B29K2023/065 B29K2023/083 B29K2023/12 B32B3/26

B32B27/32 Y10T428/249983 Y10T428/249985 Y10T428/31909

European: B29C51/16 B32B27/32 B32B3/26 L29C51/10 L29C791/00E4

L29K23/06B3 L29K23/06B5 L29K23/06B7 L29K23/06B9 L29K23/08B

L29K23/12

US: 156/212 428/141 428/141S 428/317.3 428/317.300S 428/317.7

428/515

END

Family:

Publication number	Publication date	Application number	Application date
■ AT520527 E	20110915	AT20080773745T	20080628
■ AU2008277977 AA	20090122	AU20080277977	20080628
■ AU2008277977 BB	20130418	AU20080277977	20080628
■ CA2694478 AA	20090122	CA20082694478	20080628
■ CA2694478 C	20170124	CA20082694478	20080628
■ CN101754855 A	20100623	CN200880025161	20080628
■ CN101754855 B	20130327	CN200880025161	20080628
■ DE502008004545 D1	20111013	DE200850004545T	20080628
■ EP2170605 A1	20100407	EP20080773745	20080628
■ EP2170605 B1	20110817	EP20080773745	20080628
■ NZ582159 A	20120224	NZ20080582159	20080628
■ US2010326590 AA	20101230	US20080669503	20080628
■ US8974908 BB	20150310	US20080669503	20080628
■ WO09010178 A1	20090122	WO2008EP05302	20080628
■ ZA200909034 A	20100929	ZA20090009034	20091218

Priority:

DE200710033371 20070718 EP20080773745 20080628 WO2008EP05302 20080628

Probable Assignee: TREOFAN GERMANY GMBH AND CO KG

Assignee(s): (std): KOCHER KARL HEINZ ; MUELLER AXEL ; ROTH MATHIAS ; TEWS WILFRID ; TREOFAN GERMANY GMBH AND CO KG

Assignee(s): TREOFAN GERMANY GMBH AND CO KG ; TREOFAN GERMANY GMBH AND CO

Inventor(s): (std): TEWS WILFRID ; ROTH MATHIAS ; MUELLER AXEL ; KOCHER KARL HEINZ ; KOCHER KARL HEINZ ; AXEL MUELLER ; MATHIAS ROTH ; KARL HEINZ KOCHER ; WILFRID TEWS

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; FETHERSTONHAUGH AND CO; KREMER VIOLA; LUDERSCHMIDT SCHUELER AND PARTNER; CONNOLLY BOVE LODGE AND HUTZ LLP; DRINKER BIDDLE AND REATH LLP

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

17) Family number: 49545557 (US2011212358A)

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Title: LAMINATED POROUS FILM AND SEPARATOR FOR BATTERY

Abstract: A laminated porous film having at least two porous layers layered one upon another. One porous layer consists of a resin layer containing a polypropylene resin. The other layer is a heat-resistant layer consisting of a resin composition whose crystal fusion peak temperature is higher than that of the resin composition of the layer containing the polypropylene resin. The laminated porous film has a beta activity and/or a beta crystal generation power.

Classifications:

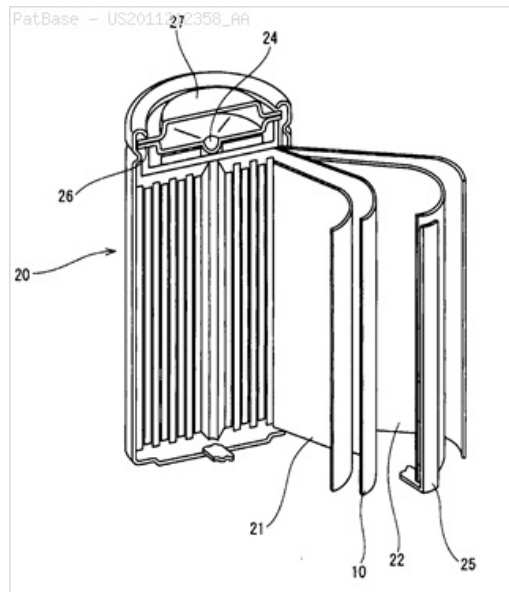
International (IPC 8-9): B32B3/00 B32B5/18

H01M2/16 (Advanced/Invention)

CPC: B32B5/32 B32B27/20 B32B27/32 H01M2/1653 H01M2/1686

Y10T428/249981 B32B3/26 B32B27/08 B32B27/18 B32B2264/0235

B32B2264/025 B32B2264/0257 B32B2264/0278 B32B2264/0285
 B32B2307/306 B32B2307/50 B32B2307/518 B32B2307/581
 B32B2307/5825 B32B2307/7246 B32B2307/732 B32B2410/00
 B32B2419/04 B32B2457/00 B32B2457/10 B32B2535/00 B32B2551/00
 B32B2607/02
European: B32B27/20 B32B27/32 B32B5/32 H01M2/16C3 H01M2/16L
US: 428/316.6 428/316.600S 429/144 429/145 429/145P



Family:

Publication number	Publication date	Application number	Application date
US2011212358 AA	20110901	US20100713654	20100226
US8592071 BB	20131126	US20100713654	20100226

Priority:

US20100713654 20100226

Probable Assignee: MITSUBISHI CHEMICAL CORP

Assignee(s): (std): MITSUBISHI PLASTICS INC ; TAKAGI JUN ; USAMI YASUSHI ; YAMADA TAKEYOSHI

Assignee(s): MITSUBISHI RAYON CO LTD ; MITSUBISHI CHEMICAL CORP

Inventor(s): (std): TAKAGI JUN ; USAMI YASUSHI ; YAMADA TAKEYOSHI

Agent(s): OBLON SPIVAK MCCLELLAND MAIER AND NEUSTADT LLP

18) Family number: 32586589 (US2006024518A)

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Title: LOW DENSITY CAVITATED OPAQUE POLYMER FILM

Abstract: A low density opaque polymer film containing at least one layer having a propylene polymer matrix that has been cavitated by a two component cavitation system, wherein the first component of the two component cavitation system is a beta-nucleating agent to produce the beta-crystalline form of polypropylene, and the second component is filler. A method of manufacturing a low density cavitated opaque polymer film, including: forming a melt containing a propylene polymer, a beta nucleating agent and filler; cooling the melt to form a film layer; and stretching the film layer to form voids therein. The cavitated opaque film has a density falling within the range of 0.2 g/cm³ to 0.45 g/cm³.

Classifications:

International (IPC 8-9): B32B27/00 B32B27/08 B32B27/18 B32B27/20 B32B27/32 B32B7/12 C08K3/22 C08K5/092

C08K5/098 (Advanced/Invention);

B32B27/00 B32B27/08 B32B27/18 B32B27/20 B32B27/32 B32B7/12 C08K3/00 C08K5/00 (Core/Invention)

CPC: B32B3/30 B32B2307/518 B32B2307/558 B32B2307/724 B32B2439/46 Y10T428/28 Y10T428/31917 Y10T428/31855
 B32B3/26 B32B27/08 B32B27/18 B32B27/20 B32B27/205 B32B27/32 B32B27/327 B32B2250/03 B32B2250/24 B32B2250/242
 B32B2250/40 B32B2255/10 B32B2255/205 B32B2255/26 B32B2264/10 B32B2264/102 B32B2264/12 B32B2274/00 B32B2307/402
 B32B2307/41 B32B2307/516 B32B2307/546 B32B2307/72 B32B2307/75 B32B2405/00 B32B2439/70 B32B2519/00 C08K3/01
 C08K5/0083

European: B32B27/08 B32B27/18 B32B27/20 B32B27/20A B32B27/32 B32B27/32C B32B3/26 B32B3/30 C08K3/00P
 C08K5/00P10 L32B250/03 L32B250/24 L32B250/24A L32B250/40 L32B255/10 L32B255/20A L32B255/26 L32B264/10
 L32B264/10D L32B264/12 L32B274/00 L32B307/402 L32B307/410 L32B307/516 L32B307/518 L32B307/546 L32B307/558
 L32B307/720 L32B307/724 L32B307/750 L32B405/00 L32B439/46 L32B439/70 L32B519/00

US: 428/343 428/343S 428/500 428/500P 428/517 428/517P

Family:

Publication number	Publication date	Application number	Application date
CA2575705 AA	20070129	CA20052575705	20050606
CA2605363 AA	20071017	CA20062605363	20060303
EP1796901 A1	20070620	EP20050756512	20050606
EP1877250 A2	20080116	EP20060721152	20060303
US2006024518 AA	20060202	US20040910146	20040802
US2006024520 AA	20060202	US20050114671	20050426
WO06022973 A1	20060302	WO2005US19859	20050606
WO06115585 A2	20061102	WO2006US07751	20060303
WO06115585 A3	20070607	WO2006US07751	20060303

Priority:

US20040910146 20040802

US20050114671 20050426

WO2005US19859 20050606

Probable Assignee: EXXON MOBIL CORP

Assignee(s): (std): EXXON MOBIL CORP ; EXXONMOBIL OIL CORP ; KONG DAN CHENG ; LERNOUS ETIENNE R H ; LERNOUX ETIENNE R ; SHEPPARD ROBERT M ; LERNOUX ETIENNE R H

Assignee(s): LERNOUS ETIENNE R

Inventor(s): (std): KONG DAN CHENG ; LERNOUX ETIENNE R ; SHEPPARD ROBERT M ; LERNOUX ETIENNE R H ; LERNOUS ETIENNE R H

Inventor(s): SHEPPARD ROBERT ; LERNOUX ETIENNE ; LERNOUS ETIENNE R ; LERNOUX ETIENNE RH

Agent(s): BORDEN LADNER GERVAIS LLP; TROCH GENEVIEVE ET AL; EXXONMOBIL CHEMICAL COMPANY, LAW TECHNOLOGY; EXXONMOBIL CHEMICAL CO LAW TECHNOLOGY; EXXONMOBIL CHEMICAL COMPANY; EXXONMOBIL CHEMICAL CO

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

19) Family number: 29353642 (US5176953A) © PatBase

Title: ORIENTED POLYMERIC MICROPOROUS FILMS

Abstract: Polyolefin resin compositions and oriented microporous films prepared from same comprising an ethylene-propylene block copolymer having an ethylene content of about 10 to about 50 wt percent, a propylene homopolymer or random propylene copolymer having up to about 10 wt percent of a comonomer of ethylene or an alpha -olefin of 4 to 8 carbon atoms, and components selected from a low molecular weight polypropylene, a beta-spherulite nucleating agent and an inorganic filler, and to processes for forming such films wherein the microporous films have improved breathability, strength, toughness and break elongation.

Classifications:

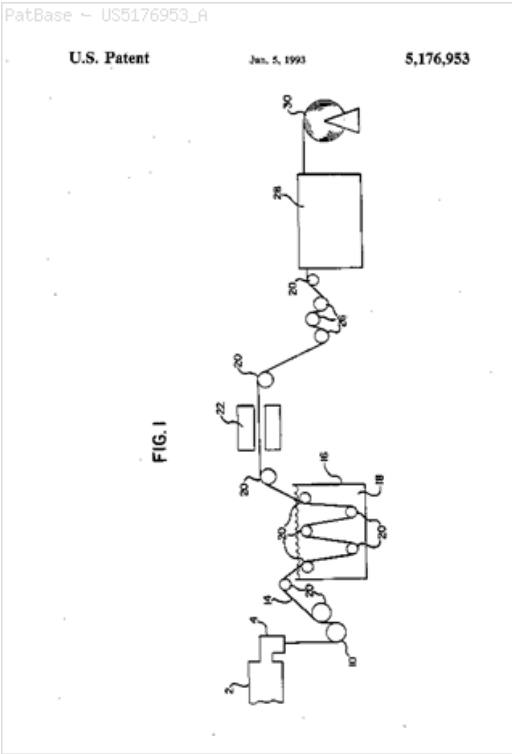
International (IPC 8-9): B29C55/04 C08J3/00 C08J3/16 C08J3/20 C08J5/18 C08J9/00 C08J9/26 C08J9/28 C08K3/26 C08K5/34 C08K5/3437 C08L23/10 C08L23/14 C08L23/16 C08L51/06 C08L53/00 C08L55/00 (Advanced/Invention); C08J9/00 C08L51/06 (Advanced/Non-invention); C08J3/00 C08J3/12 C08J3/20 C08J5/18 C08L23/00 C08L53/00 (Core/Invention); C08L23/14 C08L23/16 C08L51/00 C08L53/00 (Core/Non-invention)

International (IPC 1-7): B29C55/04 B29C55/04 B32B27/00 C08F110/00 C08J5/18 C08J9/00 C08J9/26 C08J9/28 C08K3/26 C08K5/3437 C08L23/00 C08L23/02 C08L23/02 C08L23/10 C08L23/12 C08L23/14 C08L23/16 C08L53/00

CPC: Y10T428/249978 Y10T428/249986 C08J5/18 C08J2323/10 C08L23/10 C08L23/12 C08L23/14 C08L23/20 C08L51/06 C08L53/00 C08L2205/02 C08L2205/03 C08L2205/035 C08L2205/242

European: C08J5/18 C08L23/10 C08L23/14 C08L53/00 M08J323/10 M08L205/02 M08L205/03 M08L205/035 M08L205/242 M08L23/10 M08L23/12 M08L23/20 M08L51/06 M08L53/00

US: 428/315.5 428/317.9 521/128 521/134 521/143 521/84.1 521/90 521/92 524/427 524/505 524/515 525/191 525/240 525/88 525/95



Family:

Publication number	Publication date	Application number	Application date
AU199188386 A1	19920625	AU19910088386	19911204
AU650072 B2	19940609	AU19910088386	19911204
CA2056875 AA	19920622	CA19912056875	19911203
CA2056875 C	20020312	CA19912056875	19911203
CN1047395 C	19991215	CN19911011303	19911221
CN1064491 A	19920916	CN19911011303	19911221
DE69131989 D1	20000323	DE19916031989	19911217
DE69131989 T2	20001005	DE19916031989T	19911217
DK0492942 T3	20000605	DK19910311718T	19911217
EP0492942 A2	19920701	EP19910311718	19911217
EP0492942 A3	19920805	EP19910311718	19911217
EP0492942 B1	20000216	EP19910311718	19911217
ES2143462 T3	20000516	ES19910311718T	19911217
JP3291307 B2	20020610	JP19910338894	19911220
JP4309546 A2	19921102	JP19910338894	19911220

KR100212776 B1	19990802	KR19910023835	19911221
KR19920012233 A	19920725	KR19910023835	19911221
NZ241070 A	19921223	NZ19910241070	19911219
TW231301 B	19941001	TW19920100661	19920129
US5176953 A	19930105	US19910749213	19910823
US5236963 A	19930817	US19920998450	19921230
US5317035 A	19940531	US19920993300	19921218
US5594070 A	19970114	US19950475323	19950607

Priority:

US19900633087 19901221 US19910749213 19910823 CA19912056875 19911203
US19920933300 19920821 US19920993300 19921218 US19920998450 19921230
US19940250283 19940527 US19950475323 19950607

Probable Assignee: RKW RHEINISCHE KUNSTSTOFFWERKE AG

Assignee(s): (std): BP AMOCO CORP ; AMOCO CORP

Assignee(s): AMOCO CORP CHICAGO ; AMOCO CORPUS ; BAUER CHARLES W ; AMOCO AN IN CORP CORP ; BP NORTH AMERICA INC CORP ; PFG US INC ; RHEINISCHE KUNSTSTOFFWERKE GMBH ; RKW AG ; RKW SE ; RKW RHEINISCHE KUNSTSTOFFWERKE AG ; BP AMOCO CORP CHICAGO ; CLINGMAN SCOTT R ; JACOBY PHILIP ; TAPP WILLIAM T ; RKW US INC

Inventor(s): (std): JACOBY PHILIP ; BAUER CHARLES WILLIAM ; CLINGMAN SCOTT RICHARD ; TAPP WILLIAM THOMAS ; BAUER CHARLES W ; CLINGMAN SCOTT R ; TAPP WILLIAM T ; TAPP WILLIAM T ; CHARIMANN SIGETE R ; PHILIP JACOBY ; SCOTT RICHARD CLINGMAN ; SIGETE R CHARIMANN ; CHARLES WILLIAM BAUER ; WILLIAM THOMAS TAPP ; CHARLES WILLIAM ; UIRIAMU TOOMASU TATSUPU ; SUKOTSUTO RICHIIYAADO KURINGUMA ; CHIYAARUZU UIRIAMU BAUA ; FUJITSUPU JIYAKOBAI

Inventor(s): SUKOTSUTO RICHIIYAADO KURINGUMAN

Agent(s): PHILLIPS ORMONDE FITZPATRICK; GOWLING LAFLEUR HENDERSON LLP

Designated states: BE DE DK ES FR GB IT LU NL

20) Family number: 30722813 (US2004142122A)

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Title: INK JET PRINTING SHEET

Abstract: An ink jet printing sheet comprising a colorant-receiving layer and a support, wherein the colorant-receiving layer contains a metal chelating compound having an oil-soluble group having 6 or more carbon atoms or an amino acid derivative having an oil-soluble group having 6 or more carbon atoms.

Classifications:

International (IPC 8-9): B41J2/01 B41M5/00 B41M5/50 B41M5/52 (Advanced/Invention);

B41M5/00 (Advanced/Non-invention);

B41J2/01 B41M5/00 B41M5/50 (Core/Invention);

B41M5/00 (Core/Non-invention)

International (IPC 1-7): B32B3/00 B41J2/01 B41M5/00

CPC: B41M5/52 B41M5/5218 B41M5/5236 B41M5/5254

European: B41M5/00J B41M5/00J3 B41M5/52 L41M5/52 L41M5/52C L41M5/52G L41M5/52K

US: 428/32.1

Family:

Publication number	Publication date	Application number	Application date
EP1437229 A2	20040714	EP20040000223	20040108
EP1437229 A3	20060222	EP20040000223	20040108
JP2004209918 A2	20040729	JP20030002310	20030108
JP2004209919 A2	20040729	JP20030002312	20030108
JP2006256337 A2	20060928	JP20060131885	20060510
JP3912793 B2	20070509	JP20060131885	20030108
JP3948520 B2	20070725	JP20030002310	20030108
US2004142122 AA	20040722	US20040752564	20040108

Priority:

JP20030002310 20030108 JP20030002312 20030108 JP20060131885 20060510

Probable Assignee: FUJIFILM HOLDINGS CORP

Assignee(s): (std): FUJI PHOTO FILM CO LTD ; FUJIFILM CORP

Assignee(s): FUJIFILM HOLDINGS CORP ; FUJI PHOTO FILM CO

Inventor(s): (std): OGAWA MANABU ; TAGUCHI TOSHIKI ; TAKASHIMA MASANOBU ; TSUKADA YOSHIHISA

Designated states: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

21) Family number: 48787840 (WO11047798A1)

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Title: CIGARETTE PACKAGE HAVING AN INNER WRAPPING MADE OF A POLYMER FILM

Abstract: The invention relates to the use of a single-layer or multi-layer biaxially oriented polypropylene film having at least one porous layer having an open-pore network-like structure as an inner liner of a cigarette package.

Classifications:

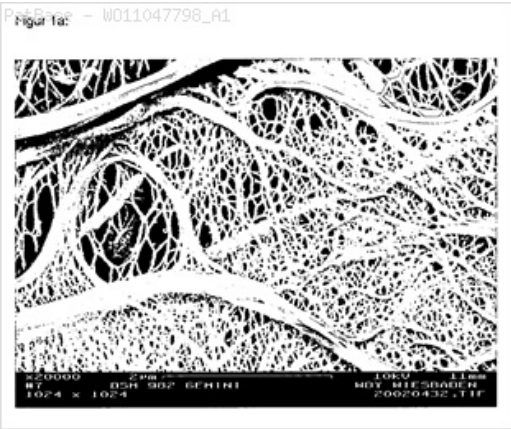
International (IPC 8-9): B32B27/32 B32B5/18 B65D65/40 B65D85/10

C08J5/18 C08K5/00 C08K5/098 (Advanced/Invention)

CPC: B65D85/1018 B32B5/18 B32B27/18 B32B27/32 C08J5/18

C08J2323/10 C08K3/346 B32B3/266 B32B27/065 B32B27/08 B32B27/16

B32B27/205 B32B2255/10 B32B2255/102 B32B2255/205 B32B2266/025
B32B2270/00 B32B2307/50 B32B2307/518 B32B2307/72 B32B2307/724
B32B2307/75 B32B2439/00 B32B2553/00
European: B32B27/18 B32B27/32 B32B5/18 B65D85/10F C08J5/18
C08K3/34B M08J323/10



Family:

Publication number	Publication date	Application number	Application date
DE502010008466 D1	20150122	DE201050008466T	20101013
EP2491074 A1	20120829	EP20100768413	20101013
EP2491074 B1	20141210	EP20100768413	20101013
WO11047798 A1	20110428	WO2010EP06241	20101013

Priority:

DE200910050275 20091021 EP20100768413 20101013 WO2010EP06241 20101013

Probable Assignee: TREOFAN GERMANY GMBH AND CO KG

Assignee(s): (std): BRAUN RALPH ; GOTTFREUND THOMAS ; SPEITH HERFURTH ANGELA ; TREOFAN GERMANY GMBH AND CO KG

Assignee(s): TREOFAN GERMANY GMBH AND COKG

Inventor(s): (std): BRAUN RALPH ; GOTTFREUND THOMAS ; SPEITH HERFURTH ANGELA

Agent(s): MAI DOERR BESIER; KREMER VIOLA

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

22) Family number: 49555884 (US2012329894A)

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Title: POLYPROPYLENE SERIES RESIN POROUS FILM, BATTERY SEPARATOR AND BATTERY

Abstract: Regarding a polypropylene series resin porous film having a polypropylene series resin as the main component, so as to exert excellent slipping ability and processability when used as a battery separator, a polypropylene series resin porous film fabricated in such a way that the coefficient of static friction against film is greater than the coefficient of static friction against SUS is proposed.

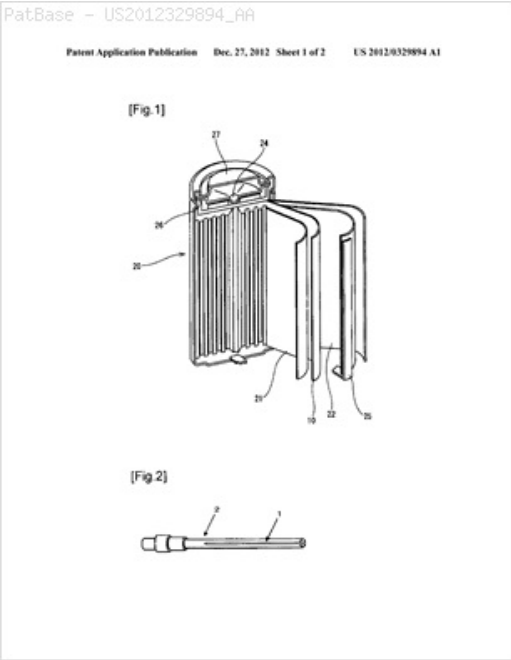
Classifications:

International (IPC 8-9): B29C55/14 B32B27/32 C08F10/06 C08J9/00 H01M10/05 H01M10/0566 H01M2/16 (Advanced/Invention)

CPC: B29C55/005 B29D7/01 B29K2023/10 B29K2023/12 B29K2105/0005 B29K2105/04 C08J5/18 C08J2323/12 H01M2/1653 H01M10/052 H01M10/0566 B29C55/14

European: B29C55/14 C08J5/18 H01M10/052 H01M10/0566 H01M2/16C3 L29K105/04 L29K23/12 M08J323/12

US: 521/143



Family:

Publication number	Publication date	Application number	Application date
CN102782027 A	20121114	CN201180011987	20110301
CN102782027 B	20160525	CN201180011987	20110301
DE602011034049 D1	20170223	DE201160034049T	20110301
EP2543697 A1	20130109	EP20110750649	20110301
EP2543697 A4	20140507	EP20110750649	20110301
EP2543697 B1	20170104	EP20110750649	20110301
JP2011108539 A1	20130627	JP20120503188T	20110301
JP5778657 B1	20150916	JP20120503188T	20110301
KR20120114342 A	20121016	KR20127020760	20110301
US2012329894 AA	20121227	US20110582659	20110301
WO11108539 A1	20110909	WO2011JP54629	20110301

Priority:

JP20100045978 20100302 EP20110750649 20110301 WO2011JP54629 20110301
JP20120503188 20110301

Probable Assignee: MITSUBISHI PLASTICS INC

Assignee(s): (std): MITSUBISHI PLASTICS INC ; MITSUBISHI PLASTICS IND ; YAMAMOTO MIHO ; USAMI YASUSHI ; YAMADA TAKEYOSHI

Assignee(s): MITSUBISHI CHEMICAL CORP

Inventor(s): (std): MIHO YAMAMOTO ; YASUSHI USAMI ; TAKEYOSHI YAMADA ; YAMADA TAKEYOSHI ; USAMI YASUSHI ; YAMAMOTO MIHO

Agent(s): Gille Hrabal; GILLE HRABAL; TAKEUCHI ICHIZAWA AND ASSOCIATES

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

23) Family number: 44989958 (US2011217584A)

© PatBase

Title: LAMINATED POROUS FILM, SEPARATOR FOR LITHIUM CELL, AND CELL

Abstract: Provided is a laminated porous film having excellent shutdown characteristics and breakdown characteristics, good tearing strength and dimensional stability, and B activity. The laminated porous film comprises layer A, the main component of which is a polypropylene resin, and layer B which contains a polyethylene resin, and the ratio of the rearing strength (HMD) in the machine direction (MD) of the laminated porous film and the tearing strength (HTD) in the transverse direction (TD) of the laminated porous film with respect to the machine direction (HMD) (HTD) is 0.08 to 2.0.

Classifications:

International (IPC 8-9): B32B27/08 B32B27/32 B32B3/26 B32B38/00

B32B5/32 C08J9/00 H01M10/0525 H01M2/16 (Advanced/Invention);

B32B27/08 B32B27/32 H01M2/16 (Advanced/Non-invention);

B32B27/32 C08J9/00 H01M2/16 (Core/Invention)

CPC: H01M2/1653 B32B5/32 B32B38/0032 B32B2305/026 B32B2307/724

B32B2323/04 B32B2323/10 B32B2457/10 H01M2/1686 H01M10/0525

Y10T428/31913 Y10T428/249953 B32B3/26 B32B7/12 B32B2250/242

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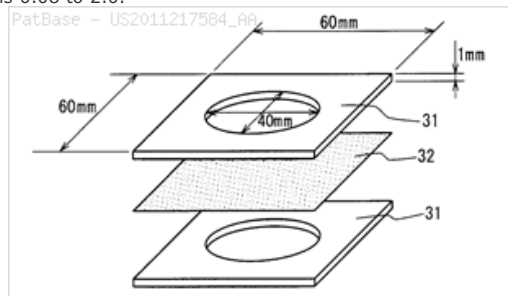
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L32B305/02D L32B307/724 L32B323/04 L32B323/10 L32B457/10

T01M10/0525 Y02E60/12 Y02E60/12B

US: 428/304.4 428/304.400S 428/516 429/144 429/144P



Family:

Publication number	Publication date	Application number	Application date
CN102209632 A	20111005	CN200980144207	20091109
CN102209632 B	20141210	CN200980144207	20091109
CN103400956 A	20131120	CN201310313805	20091109
DE602009022097 D1	20140410	DE200960022097T	20091109
DE602009029709 D1	20150409	DE200960029709T	20091109
EP2360014 A1	20110824	EP20090824869	20091109
EP2360014 A4	20120404	EP20090824869	20091109
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JP2010111096 A2	20100520	JP20080287853	20081110
JP4734396 B2	20110727	JP20080287852	20081110
JP4734397 B2	20110727	JP20080287853	20081110
KR101071602 B1	20111010	KR20117008043	20091109
KR20110044336 A	20110428	KR20117008043	20091109
US2011217584 AA	20110908	US20090128449	20091109
US8288033 BB	20121016	US20090128449	20091109
WO10053172 A1	20100514	WO2009JP69042	20091109

Priority:

JP20080287852 20081110
EP20120197872 20091109

JP20080287853 20081110
WO2009JP69042 20091109

EP20090824869 20091109

Probable Assignee: MITSUBISHI CHEMICAL CORP

Assignee(s): (std): TERAKAWA TORU ; USAMI YASUSHI ; YAMAMOTO MIHO ; YAMADA TAKEYOSHI ; MITSUBISHI PLASTICS INC ; MITSUBISHI PLASTICS IND

Assignee(s): MITSUBISHI RAYON CO LTD ; MITSUBISHI CHEMICAL CORP

Inventor(s): (std): YAMAMOTO MIHO ; TERAKAWA TORU ; USAMI YASUSHI ; YAMADA TAKEYOSHI ; MIHO YAMAMOTO ; YASUSHI USAMI ; TORU TERAKAWA ; TAKEYOSHI YAMADA ; TERAKAWA TOORU ; YAMADA TAKEMIKI

Inventor(s): YAMAMOTO MIHO NAGAHAMA SHI ; TERAKAWA TORU NAGAHAMA SHI ; YAMADA TAKEYOSHI NAGAHAMA SHI ; USAMI YASUSHI NAGAHAMA SHI

Agent(s): BEETZ AND PARTNER MBB PATENTANWALTE; HAYES ADRIAN CHETWYND; BOULT WADE TENNANT; OWADA KAZUMI; OBLON SPIVAK MCCLELLAND MAIER AND NEUSTADT LLP

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

24) Family number: 28630979 (US2003104192A)

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Title: APPARATUS FOR SUBSTANTIAL REMOVAL OF ORGANIC SUBSTANCE(S) AND/OR NITROGEN SOURCE(S) FROM AN AQUEOUS MEDIUM

Abstract: Described is an apparatus for the removal of organic substances and/or nitrogen sources from an aqueous medium by exposing the aqueous medium to the action of microorganisms supported on a gas permeable, water impermeable layer, or on and/or in a three dimensional microbial support layer, that is proximate a gas delivery layer through which gas, preferably, oxygen-containing gas, is supplied to the gas permeable layer such that it diffuses through the gas permeable layer and is supplied to the microorganisms.

Classifications:

International (IPC 8-9): B01D29/07 B01D53/22 B01D61/00 B01D69/10 B01D71/26 B01D71/32 B01D71/36 B01D71/54 B01D71/56 B01D71/68 B01D71/70 B32B27/12 B32B3/24 B32B3/26 B32B3/28 B32B3/30 B32B5/18 C02F3/06 C02F3/10 C02F3/12 C02F3/20 C02F3/30 C02F3/34 (Advanced/Invention); B01D69/10 B32B27/12 B32B3/30 C02F3/10 C02F3/20 (Advanced/Non-invention);

B01D29/01 B01D53/22 B01D71/00 B32B3/24 B32B3/26 B32B5/18 C02F3/06 C02F3/10 C02F3/20 C02F3/34 (Core/Invention)

International (IPC 1-7): B01D53/22 B01D69/10 B01D71/32 B01D71/70 B32B27/12 B32B3/24 B32B3/26 B32B3/30 C02F3/06 C02F3/10 C02F3/12 C02F3/20 C02F3/34

CPC: B01D61/00 C02F3/108 C02F3/102 C02F3/201 Y02E50/343 Y10T428/24694 Y10T428/249953 Y10T428/8305 Y02W10/15 Y10T428/249964 Y10T428/249971 Y10T428/249978 Y10T428/249979 Y10T428/249981 Y10T428/249991 Y10T428/249992 B32B2307/724 B32B2307/7265 B32B3/28 B32B3/26 B32B5/18

European: B01D61/00 B32B3/26 B32B3/28 B32B5/18 C02F3/10C C02F3/10K6 C02F3/20B Y02E50/34B

US: 210/490 210/506 210/510.1 210/640 428/182 428/182S 428/304.4 428/304.400P 428/311.51 428/311.510S 428/313.3 428/313.300S 428/315.5 428/315.500P 428/315.7 428/315.700S 428/316.6 428/319.3 428/319.300S 428/319.7 428/543 428/543S 95/46 96/11 96/6

PatBase - US2003104192_AA

Patent Application Publication Jun. 5, 2003 Sheet 1 of 5 US 2003/0104192 A1

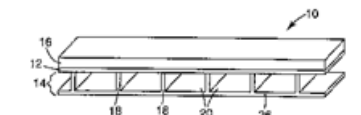


Fig. 1

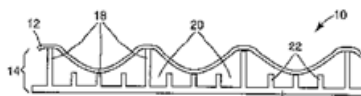


Fig. 2

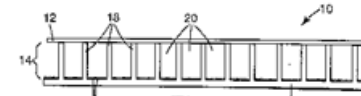


Fig. 3



Fig. 4

Family:

Publication number	Publication date	Application number	Application date
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BRPI0409669 A	20060418	BR2004PI09669	20040312
EP1453762 A1	20040908	EP20020805056	20021011
EP1622703 A1	20060208	EP20040720409	20040312
JP2005511303 T2	20050428	JP20030552674T	20021011
JP2007504000 T2	20070301	JP20060532323T	20040312
JP4680504 B2	20110511	JP20030552674T	20021011
KR20040066162 A	20040723	KR20047009028	20021011
KR20060010801 A	20060202	KR20057021499	20040312
MXPA05012119 A1	20060210	MX2005PA12119	20040312
US2003104192 AA	20030605	US20010017632	20011214
US2003203183 AA	20031030	US20030437799	20030514
US7114621 BB	20061003	US20030437799	20030514

US7140495 BB	20061128	US20010017632	20011214
WO03051782 A1	20030626	WO2002US32566	20021011
WO04103536 A1	20041202	WO2004US07607	20040312

Priority:

US20010017632 20011214 WO2002US32566 20021011 US20030437799 20030514
WO2004US07607 20040312

Probable Assignee: 3M CO

Assignee(s): (std): 3M CO ; 3M INNOVATIVE PROPERTIES CO

Assignee(s): 3M INNOVATIVE PROPERTIES COMPANY

Inventor(s): (std): HALL JR JERALD W ; NELSON JAMES M ; MROZINSKI JAMES S ; HALL JERALD W JR ; HESTER JONATHAN F ;
HALL JERALD W ; LAKSHMI BRINDA B ; SPIEWAK BRIAN E ; HOLM DAVID R ; KIRK SETH M ; DAVID MOSES
M

Inventor(s): BRIAN E SPIEWAK ; JAMES M NELSON ; JAMES S MROZINSKI ; JONATHAN F HESTER ; JERALD W JR HALL ;
SETH M ; JONATHAN F ; BRINDA B ; BRIAN E ; DAVID R ; MOSES M

Agent(s): DAVIES COLLISON CAVE PTY LTD; DAVIES COLLISON CAVE; DOUGLAS B

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK
DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ
LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU
SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW