

Search history

Search (metallocene or metanol?cene) and "molecular weight" and young and viscosity and modulus and tensile and strength and polyethylene and
1: oxidative and time and induction and temperature and gel and impact and energy and charpy and stretch* (Results 0)

Search (metallocene or metanol?cene) and "molecular weight" and young and viscosity and modulus and tensile and strength and polyethylene and
2: oxidative and time and induction and temperature and gel and impact and energy and charpy and stretch* (Results 1)

Search (metallocene or metanol?cene) and "molecular weight" and young and viscosity and modulus and tensile and strength and polyethylene and
3: oxidative and time and induction and temperature (Results 10)

Search (metallocene or metanol?cene) and "molecular weight" and young and viscosity and modulus and tensile and strength and polyethylene and
4: shear and gel (Results 160)

Search 4 and energy and stretch* (Results 98)
5:

Search 5 and impact (Results 91)
6:

Search 6 and (shear w5 viscosity) and (tensile w5 strength) and (young w5 modulus) (Results 40)
7:

Search 7 and charpy (Results 1)
8:

Search 7 and (time or temperature) (Results 40)
9:

Search 9 and tac=(polyethylene) (Results 27)
10:

Search (metallocene or metanol?cene) and "molecular weight" and polyethylene and charpy (Results 357)
11:

Search 11 and temperature and (impact w5 energy) (Results 51)
12:

Search 12 and (viscosity or tensile or strength) (Results 51)
13:

Search 13 and tac=(polyethylene) (Results 26)
14:

Title: PROCESS FOR PRODUCING BIMODAL **POLYETHYLENE** RESINS

Abstract: A process for producing bimodal **polyethylene** resins in two reactors in series, the process comprising producing a first **polyethylene** resin fraction in a first slurry loop reactor in a diluent in the presence of a catalyst and producing a second **polyethylene** resin fraction in a second slurry loop reactor, serially connected to the first reactor, in the diluent in the presence of the catalyst, the first **polyethylene** resin fraction being passed from the first reactor to the second reactor together with the catalyst, one of the first and second reactors producing a resin fraction of higher molecular than the resin fraction produced by the other of the first and second reactors, characterised in that the first reactor is fed with a feed of ethylene and diluent having an ethylene content of at least 70 wt percent based on the weight of the diluent and in that in the first reactor the slurry of **polyethylene** in the diluent has a solids content of at least 30 wt percent based on the weight of the diluent

Classifications:

International (IPC 8-9): B01J19/18 C08F10/02 C08F2/00 C08F2/14 C08F210/02 C08F297/08 C08G85/00 (Advanced/Invention); C08F10/00 (Core/Invention)

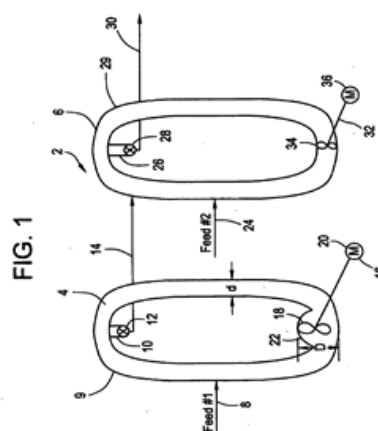
International (IPC 1-7): C08F10/02 C08F2/00 C08F2/14 C08F297/08
CPC: B01J19/1837 B01J2219/0004 C08F10/02

European: B01J19/18C8 C08F10/02 L01J219/00A6L

US: 526/124.2 526/160 526/348.4 526/348.6 526/64 526/64P 526/65 526/65P

PatBase - US2004077803_AA

Patent Application Publication Apr. 22, 2004 Sheet 1 of 6 US 2004/0077803 A1

**Family:**

Publication number	Publication date	Application number	Application date
AT509042 E	20110515	AT20010986305T	20011002
AU200221642 A1	20020415	AU20020021642	20011002
AU200221642 A5	20020415	AU20020021642	20011002
AU2002221642 AA	20020415	AU20020221642	20011002
CN1326887 C	20070718	CN20018016800	20011002
CN1468264 A	20040114	CN20018016800	20011002
DE60144615 D1	20110622	DE20016044615	20011002
DK1322681 T3	20110620	DK20010986305T	20011002
EP1195388 A1	20020410	EP20000121646	20001004
EP1322681 A1	20030702	EP20010986305	20011002
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JP4101648 B2	20080618	JP20020532503T	20011002
KR100803995 B1	20080218	KR20037004765	20011002
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US2006189768 AA	20060824	US20060410169	20060424
US7034092 BB	20060425	US20030398162	20031117
WO0228922 A1	20020411	WO2001EP11394	20011002

Priority:

EP20000121646 20001004 EP20010986305 20011002 WO2001EP11394 20011002
US20030398162 20031117 US20060410169 20060424

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Assignee(s): (std): ATOFINA RES ; ATOFINA RES S A ; ATOFINA RES SA ; MARECHAL PHILIPPE ; TOTAL PETROCHEMICALS RES FELUY ; TOTAL PETROCHEMICALS RES ; ATOFINA RESEARCH SA ; TOTAL RESEARCH AND TECHNOLOGY

FELUY

Assignee(s): TOTAL PETROCHEMICALS RESEARCH FELUY SENEFFE ; ATOFINA RESEARCH ZONE IND SA ; TOTAL PETROCHEMICALS RESEARCH ; TOTAL PETROCHEMICALS RESEARCH FELUY ; ATOFINA RESEARCH ; ATOFINA RESEARCH S A

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Inventor(s): PHILIPPE MARECHAL

Agent(s): FINA TECHNOLOGY INC

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 PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Title: **POLYETHYLENE** PIPE RESINS AND PRODUCTION THEREOF

Abstract: A **polyethylene** resin comprising from 35 to 49 weight percent of a first **polyethylene** fraction of high **molecular weight** and from 51 to 65 weight percent of a second **polyethylene** fraction of low **molecular weight**, the first **polyethylene** fraction having a density of up to 0.930 grams per cubic centimetre, and an HLM of less than 0.6 g/10 min and the second **polyethylene** fraction comprising a high density **polyethylene** having a density of at least 0.969 grams per cubic centimetre and an MI2 of greater than 10 g/10 min, and the **polyethylene** resin, having a density of greater than 0.946 grams per cubic centimetre, an HLM of from 1 to 100 g/10 min, a dynamical **viscosity**, measured at 0.01 radians/second, greater than 200,000 Pa.s and a ratio of the dynamical **viscosities** measured at, respectively 0.01 and 1 radians/second greater than 8.

Classifications:

International (IPC 8-9): C08F10/02 C08F2/00 C08F210/02 C08F297/08 C08F4/64 C08L23/04 C08L23/06 F16L9/12 (Advanced/Invention); C08F10/02 C08F210/16 C08L23/04 C08L23/08 F16L9/12 (Advanced/Non-invention);

C08F10/00 C08L23/00 F16L9/00 (Core/Invention)

International (IPC 1-7): C08F10/02 C08F2/00 C08F297/08 C08L1/00 C08L23/04 C08L23/06 F16L9/12

CPC: C08F4/65912 C08F4/65916 C08F4/65927 C08F210/16 C08L23/06 C08L23/0815 C08L2205/025 C08L2308/00 C08L2314/06

European: C08F210/16 C08L23/06 M08F210/16 M08F4/6592B4 M08F4/659K M08F4/659L M08L205/025 M08L23/08A1 M08L308/00 M08L314/06

US: 52/191 521/910 525/191 525/191P 525/24 525/240 525/240S 525/53 525/53P 526/16 526/160 526/160S 526/165 526/65 526/65S 526/943 526/943S

PatBase - IP: 20030066646_A

$$G^*(\omega) = \frac{\sigma(\omega, t)}{\gamma(\omega, t)} = G'(\omega) + i \cdot G''(\omega)$$

$$G'(\omega) = \sqrt{G'^2(\omega) + G''^2(\omega)} ; \tan \delta(\omega) = \frac{G''(\omega)}{G'(\omega)}$$

$$\eta^*(\omega) = \eta'(\omega) - i \cdot \eta''(\omega) = \frac{G'(\omega)}{\omega} - i \cdot \frac{G''(\omega)}{\omega}$$

$$\|\eta^*(\omega)\| = \frac{\sqrt{G'^2(\omega) + G''^2(\omega)}}{\omega}$$

Family:

Publication number	Publication date	Application number	Application date
AT324407 E	20060515	AT20010982444T	20011025
AU200214028 A1	20020515	AU20020014028	20011025
AU200214028 A5	20020515	AU20020014028	20011025
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DK1330490 T3	20060828	DK20010982444T	20011025
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EA200300454 A1	20031030	EA20030000454	20011025
EP1201711 A1	20020502	EP20000203745	20001027
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EP1330490 B1	20060426	EP20010982444	20011025
ES2263672 T3	20061216	ES20010982444T	20011025
HU0302646 AB	20031128	HU20030002646	20011025
HU0302646 AC	20110428	HU20030002646	20011025
HU229648 B1	20140328	HU20030002646	20011025
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JP4475453 B2	20100609	JP20020539429T	20011025
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KR20030066646 A	20030809	KR20037005799	20011025
NO20031878 A	20030611	NO20030001878	20030425
NO20031878 A0	20030425	NO20030001878	20030425
PL201795 B1	20090529	PL20010361623	20011025
PL361623 A1	20041004	PL20010361623	20011025
US2004157988 AA	20040812	US20040415209	20040329
US2006009584 AA	20060112	US20050220763	20050907
US6946521 BB	20050920	US20010415209	20011025
US7127853 BB	20061031	US20050220763	20050907
WO0236678 A1	20020510	WO2001EP12417	20011025

Priority:

EP20000203745 20001027 EP20010982444 20011025 US20010415209 20011025
WO2001EP12417 20011025 US20040415209 20040329 US20050220763 20050907

Probable Assignee: TOTAL PETROCHEMICALS RESEARCH FELUY

Assignee(s): (std): INEOS MFG BELGIUM NV ; SOLVAY ; MISERQUE OLIVIER ; MICHEL JACQUES ; SIBERDT FABIAN ; ROUYER VIRGIL ; BETTONVILLE SERGE ; COSTA JEAN LOUIS ; DAMME ERIC ; DUPIRE MARC ; ATOFINA RES ; SIBERDT FABIAN ; INNOVENE MFG BELGIUM N V ; TOTAL PETROCHEMICALS RES FELUY ; INNOVENE MFG BELGIUM NV ; SOLVAY POLYOLEFINS EUROPE BELGIUM ; TOTAL RESEARCH AND TECHNOLOGY FELUY

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Inventor(s): (std): BETTONVILLE SERGE ; COSTA JEAN LOUIS ; DAMME ERIC ; DUPIRE MARC ; MARC DUPIRE ; MICHEL JACQUES ; MISERQUE OLIVIER ; OLIVIER MISERQUE ; ROUYER VIRGIL ; JACQUES MICHEL ; SIBERDT FABIAN ; SIBENDT FABIAN ; ROUYER VIRGILE ; MISERQUE OLIVER

Inventor(s): VIRGIL ROUYER ; JEAN LOUIS COSTA ; SERGE BETTONVILLE ; ERIC DAMME ; FABIAN SIBERDT

Agent(s): MIDDLETONS; K AND L GATES; FINA TECHNOLOGY INC; JACKSON WILLIAM D; WILLIAM D

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 PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Title: POLYETHYLENE PIPE RESINS AND PRODUCTION THEREOF

Abstract: A polyethylene resin comprising a blend of from 35 to 49 wt percent of a first polyethylene fraction of high molecular weight and 51 to 65 wt percent of a second polyethylene fraction of low molecular weight, the first polyethylene fraction comprising a linear low density polyethylene having a density of up to 0.928 g/cm³, and an HLMI of less than 0.6 g/10 min and the second polyethylene fraction comprising a high density polyethylene having a density of at least 0.969 g/cm³, and an MI2 of greater than 100 g/10 min, and the polyethylene resin, having a density of greater than 0.951 g/cm³ and an HLMI of from 1 to 100 g/10 min.

Classifications:

International (IPC 8-9): C08F10/02 C08F2/00 C08F297/08 C08L23/04 C08L23/06 F16L9/00 F16L9/12 (Advanced/Invention); C08F10/02 C08L23/06 C08L23/08 F16L9/12 (Advanced/Non-invention)

International (IPC 1-7): C08F10/02 C08F2/00 C08F297/08 C08F8/00 C08L23/04 C08L23/06 F16L9/00 F16L9/12

CPC: C08F4/65912 C08F4/65916 C08F4/65927 C08F210/16 C08L23/04 C08L23/0815 C08L2205/025 C08L2308/00 C08L23/06 F16L9/12

European: C08F210/16 C08L23/04 C08L23/06 F16L9/12 M08F4/6592B4 M08F4/659K M08F4/659L M08L205/025 M08L23/08A1 M08L308/00

US: 525/191 525/191P

Family:

Publication number	Publication date	Application number	Application date
AU200220664 A1	20020506	AU20020020664	20011025
AU200220664 A5	20020506	AU20020020664	20011025
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Priority:

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Probable Assignee: TOTAL PETROCHEMICALS RESEARCH FELUY

Assignee(s): (std): COSTA JEAN LOUIS ; BETTONVILLE SERGE ; MISERQUE OLIVIER ; MICHEL JACQUES ; DUPIRE MARC ; SIBERDT FABIAN ; SOLVAY ; SOLVAY POLYOLEFINS EUROP S A ; TOTAL PETROCHEMICALS RES FELUY ; SOLVAY POLYOLEFINS EUROPE BELGIUM SA ; SOLVAY POLYOLEFINS EUROPE BELGIUM ; ATOFINA RES

Assignee(s): ATOFINA RESEARCH ; SOLVAY POLYOLEFINS EUROPE BELGIUM SOCIETE ANONYME ; SOLVAY POLYOLEFINS EUROPE S A BRUZZEL ; SOLVAY POLYOLEFINS EUROPE SA ; SOLVAY POLYOLEFINS EUROPE BELGIUM SOC ANONYME ; SOLVAY Polyolefins Europe S A ; TOTAL PETROCHEMICALS RESEARCH FELUY

Inventor(s): (std): BETTONVILLE SERGE ; COSTA JEAN LOUIS ; DUPIRE MARC ; JACQUES MICHEL ; MICHEL JACQUES ; SIBERDT FABIAN ; MISERQUE OLIVIER ; MISERQUE OLIVER ; MARC DUPIRE ; OLIVIER MISERQUE

Inventor(s): SERGE BETTONVILLE ; JEAN LOUIS COSTA ; FABIAN SIBERDT

Agent(s): MIDDLETONS; K AND L GATES; WILLIAM D

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 PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Title: FILM WITH HIGH IMPACT **STRENGTH**

Abstract: A film with a broad **molecular weight** distribution, excellent impact **strength** and a high dart drop value or moderate dart drop value accompanied by good optical property consisting of a bimodal terpolymer comprising a low **molecular weight** homopolymer of ethylene and a high **molecular weight** terpolymer of ethylene, 1-butene and a C6 to C12 alpha-olefin, or a bimodal terpolymer comprising a low molecular weight polymer which is a binary copolymer of ethylene and a C4 to C12 alpha-olefin and a high **molecular weight** polymer which is either a binary copolymer of ethylene and 1-butene, if the low **molecular weight** polymer is a binary co-polymer of ethylene and a C6 to C12 alpha-olefin, or a terpolymer of ethylene, 1-butene and a C6 to C12 alpha-olefin.

Classifications:

International (IPC 8-9): B29C49/04 B32B27/32 B65B11/00 B65D75/04 C08F10/02 C08F110/02 C08F210/02 C08F210/16 C08F297/08 C08J5/18 C08L23/04 C08L23/06 C08L23/08 C08L23/18 (Advanced/Invention); B29C49/04 B32B27/32 B65B11/00 C08F10/02 C08F110/02 C08F297/08 C08J5/18 (Advanced/Non-invention); C08F10/00 C08F297/00 C08J5/18 (Core/Invention)

International (IPC 1-7): C08F10/02 C08F210/02 C08F210/16 C08F297/08 C08F4/44 C08J5/18 C08L1/00 C08L23/04

CPC: Y10T428/31855 Y10T428/31909 C08F110/02 C08F210/16 C08J2323/08 C08J5/18 C08F297/08

European: C08F210/16 C08F297/08 C08J5/18 M08F110/02 M08F210/16 M08J323/08

US: 428/500 428/515 525/240 525/240S 525/53 525/53P 526/160 526/160S 526/170 526/170S 526/348 526/348.1 526/348.100P 526/348.100S 526/348.2 526/348.200S 526/348.3 526/348.300S 526/348.4 526/348.400S 526/348.5 526/348.500S 526/348.6 526/348.600S 526/64 526/65 526/65S

PatBase - W003066699_A1

WD 03/06/99 PCT/JP98/0440

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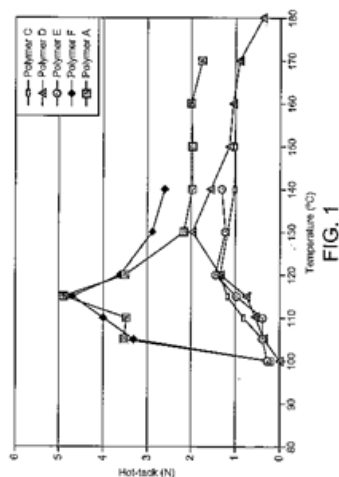


FIG. 1

SUBSTITUTE SHEET (RULE 26)

Family:

Publication number	Publication date	Application number	Application date
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CN1628135 A	20050615	CN20038002855	20030203
CN1628136 A	20050615	CN20038003239	20030204
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ES2236371 T5	20110801	ES20020002578T	20020204
ES2244917 T3	20051216	ES20030701623T	20030204
IN01952DN2004 A	20070302	IN2004DN01952	20040707
IN05736DN2008 A	20080926	IN2008DN05736	20080701
IN222000 B	20081003	IN2004DN01952	20040707
JP2005533131 T2	20051104	JP20030566066T	20030204
KR100702098 B1	20070402	KR20047011624	20030204
KR20040088487 A	20041016	KR20047011624	20030204
PL373445 A1	20050822	PL20030373445	20030204
RU2004121679 A	20050610	RU20040121679	20030204
RU2004123882 A	20050810	RU20040123882	20030203

	RU2296775 C2	20070410	RU20040121679	20030204
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	US7256239 BB	20070814	US20030501625	20030204
	US7524897 BB	20090428	US20050503611	20050124
	WO03066698 A1	20030814	WO2003EP01042	20030203
	WO03066699 A1	20030814	WO2003GB00480	20030204

Priority:

DE20026002660 20020204 EP20020002578 20020204 WO2003EP01042 20030203
EP20030701623 20030204 WO2003GB00480 20030204 WO2003GB00480 20040728

Probable Assignee: BOREALIS TECHNOLOGY OY

Assignee(s): (std): AEAERILAE JANI ; AEAERILAE JARI ; BOREALIS TECH OY ; BOREALIS TECHNOLOGY OY ; ORA MARJA ; SIVONEN TUULA ; VAHTERI MARKKU ; HELLAND IRENE ; SKAR MERETE ; BOREALIS TEKNOLODZHI OJ

Assignee(s): BOREALIS TECHNOLOGY OY PORVOO ; AARILA JANI ; AARILA JARI

Inventor(s): (std): AEAERILAE JARI ; AEAERILAE JANI ; ARILO JANI ; EHRILJA JANI ; AEAERILAE JARI ORA MARJA SIVONEN TUULA VAHTERI MAR ; AAERILA JARI ; AARILA JANI ; AARILA JARI ; HELLAND IRENE ; MARKKU AEAERILAE JARI ORA MARJ ; MARKKU HELLAND IRENE SKAR MERE ; KHELLAND IRENE ; JARI AARILA ; MARJA ORA ; JANI AARILA ; HELLAND IRENE SKAR MERETE AEAERILAE JANI ORA MARJA ; MARKKU VAHTERI ; MERETE SKAR ; IRENE HELLAND ; SIVONEN TUULA ; ORA MARJA ; VAHTERI MARKKU ; SKAR MERETE ; ORA MAR JA ; VAKHTERI MARKKU ; TUULA SIVONEN ; ORA MARDZHA ; JARI AEAERILAE

Inventor(s): HELLAND IRENE SKAR MERETE AEAERILAE JANI ORA... ; HELLAND IRENE SKAR MERETE AEAERILAE JANI ORA MARJA VAHTERI MARKKU ; ORA MAR'JA ; JANI AARILO ; {UMLAUT OVER ()}AEAERILAE JARI ; A A RILA JANI ; AARILA JAIN ; AEAERILAE JARI ORA MARJA SIVONEN TUULA VAHTERI ; AEAERILAE JARI ORA MARJA SIVONEN TUULA VAHTERI MARKKU

Agent(s): GRIFFITH HACK; KADOR AND PARTNER; FAY SHARPE FAGAN MINNICH AND MCKEE LLP; OHLANDT GREELEY RUGGIERO AND PERLE LLP; FAY SHARPE 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 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

Title: HDPE RESINS FOR USE IN PRESSURE PIPE AND RELATED APPLICATIONS

Abstract: The present invention provides bimodal polyethylene resins in which the high molecular weight ethylene copolymer component typically has a relatively narrow molecular weight distribution, with short chain branching content being substantially constant across its molecular weight distribution. The resins of this invention are typically characterized by improved toughness and resistance to slow crack propagation properties making them useful for pressure pipe applications.

Classifications:

International (IPC 8-9): B28B3/20 B29C47/00 B29C47/20 C08F10/02 C08F2/01 C08J5/18 C08L23/00 C08L23/04 C08L23/06 C08L23/08

F16L9/127 (Advanced/Invention);

C08F2/00 C08L23/04 C08L23/06 (Advanced/Non-invention);

C08F10/00 C08F2/01 C08L23/00 (Core/Invention)

International (IPC 1-7): C08L23/00 C08L23/04 C08L23/08

CPC: C08L23/0815 C08L2205/02 C08L2205/025 F16L9/127 C08L23/04 C08L23/06

European: C08L23/04 C08L23/08A1 F16L9/127 M08L205/02

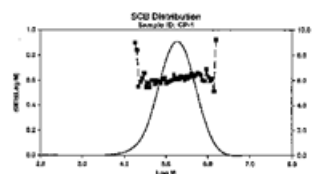
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US: 264/176.1 264/177.14 264/209.1 264/209.100P 524/191 524/240 524/528 524/528S 525/191 525/240 525/240P 525/240S 525/53 525/53P 526/111

PatBase - US2005245689_AA

Patent Application Publication Nov. 3, 2005 Sheet 1 of 5 US 2005/0245689 A1

Figure 1



Family:

Publication number	Publication date	Application number	Application date
AT448273 E	20091115	AT20050742224T	20050429
AT502079 E	20110415	AT20050013212T	20050429
AU2005241032 AA	20051117	AU20050241032	20050429
AU2005241032 BB	20100930	AU20050241032	20050429
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SG170847 A1	20110530	SG20110002537	20050429
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WO05108484 A1	20051117	WO2005US14877	20050429

Priority:

US20040835755	20040430	CA20052564779	20050429	CA20052836602	20050429
WO2005US14877	20050429	EP20050742224	20050429	US20100725493	20100317
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Probable Assignee: CHEVRON PHILLIPS CHEMICAL CO

Assignee(s): (std): CHEVRON PHILLIPS CHEMICAL CO ; KRISHNASWAMY RAJENDRA K ; YANG QING

Assignee(s): CHEVRON PHILLIPS CHEMICAL CO LP ; CHEVRON PHILLIPS CHEMICAL COMPANY ; CHEVRON PHILLIPS CHEMICAL COMPANY L P ; CHEVRON PHILLIPS CHEMICAL COMPANY LP

Inventor(s): (std): KRISHNASWAMY RAJENDRA K ; YANG QING ; QING YANG ; QING KRISHNASWAMY RAJENDRA K Y

Inventor(s): KRISHNASWAMY RAJENDRA ; RAJENDRA K KRISHNASWAMY

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; FINLAYSON AND SINGLEHURST; STEVENS IAN EDWARD; VALLEJO JUAN PEDRO; HENRY GOH S PTE LTD; WOMBLE CARLYLE SANDRIDGE AND RICE PLLC; MERCHANT AND GOULD CHEVRON PHILLIPS; MERCHANT AND GOULD; MERCHANT AND GOULD PC

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 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 SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Title: ADJUSTING POLYMER CHARACTERISTICS THROUGH PROCESS CONTROL

Abstract: Properties of a polymer produced using a dual catalyst on the same support, such as polydispersity and comonomer incorporation, may be controlled by controlling reaction parameters such as **temperature**, monomer pressure, hydrogen partial pressure and the presence of non-polymerizable hydrocarbon. This provides an easy method to control the bimodality of a polymer as well as comonomer incorporation.

Classifications:

International (IPC 8-9): C08F10/00 C08F10/02 C08F2/00 C08F2/12 C08F2/34 C08F2/38 C08F4/00 C08F4/16 C08F4/44 C08F4/64 C08F4/646 C08F4/6592 C08G64/00 C08J5/18 C08L23/06 (Advanced/Invention); C08F10/00 C08F2/00 C08F2/12 C08F2/34 C08F2/38 C08F4/00 C08G64/00 C08J5/18 C08L23/00 (Core/Invention)

CPC: Y10S526/901 Y10S526/905 C08F210/16 C08F4/65912 C08F4/65916 C08F4/6592 C08F10/00 C08F2400/02

European: C08F10/00 C08F210/16 M08F210/16 M08F4/6592 M08F4/659K M08F4/659L M08F400/02

US: 526/113 526/113P 526/114 526/118 526/119 526/124.1 526/124.100P 526/73 526/901 526/905 528/371 528/371P

PatBase - US2006122342_AA

Patent Application Publication Jan. 6, 2006 Sheet 1 of 3 US 2006/0122342 A1

Figure 1

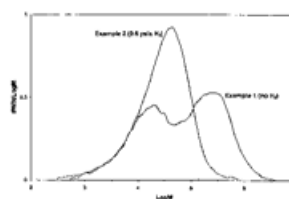
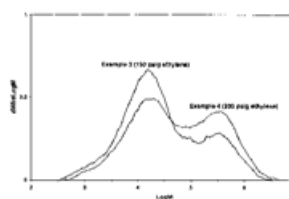


Figure 2

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EP1669372 B1	20080723	EP20050257476	20051205
EP1669373 A1	20060614	EP20050257477	20051205
EP1669373 B1	20131002	EP20050257477	20051205
ES2311199 T3	20090201	ES20050257476T	20051205
ES2442443 T3	20140211	ES20050257477T	20051205
JP2006161047 A2	20060622	JP20050351598	20051206
JP2006161048 A2	20060622	JP20050351621	20051206
JP5086537 B2	20121128	JP20050351598	20051206
US2006122342 AA	20060608	US20040006075	20041207
US2006122362 AA	20060608	US20050156896	20050620
US2008108763 AA	20080508	US20070985947	20071119
US7321015 BB	20080122	US20040006075	20041207
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Priority:

US20040006075 20041207 US20050156896 20050608 US20050156896 20050620
CA20052527579 20051122 CA20052527581 20051122 EP20050257477 20051205
US20070985947 20071119

Probable Assignee: NOVA CHEMICALS (INTERNATIONAL) SA**Assignee(s):** (std): NOVA CHEM INT SA ; NOVA CHEMICALS CORP ; NOVA CHEM INTERNATL SA**Assignee(s):** NOVA CHEMICALS INT S A ; MESQUITA PAUL ; ZORICAK PETER ; NOVA CHEMICALS INT SA ; NOVA CHEMICALS INTERNATIONAL SA ; NOVA CHEMICALS (INTERNATIONAL) SA ; BAAR CLIFF ROBERT ; HOANG PETER PHUNG MINH ; KER VICTORIA ; NOVA CHEMICALS SA**Inventor(s):** (std): BAAR CLIFF R ; BAAR CLIFF ROBERT ; HOANG PETER P M ; HOANG PETER PHUNG M ; HOANG PETER PHUNG MINH ; KER VICTOIA ; KER VICTORIA ; MESQUITA PAUL ; PHUNG MINH HOANG PETER ; ZORICAK PETER**Inventor(s):** ZORICAK PETER CALGARY ALBERTA ; PHUNG MINH HOANG PETER CALGARY ALBERTA ; MESQUITA PAUL CALGARY ALBERTA ; KER VICTORIA CALGARY ALBERTA ; HOANG PETER PM ; HOANG PETER PHUNG ; BAAR CLIFF ROBERT CALGARY ALBERTA ; HOANG PETER ; BAAR CLIFF**Agent(s):** TROTT TREVOR; LEINWEBER AND ZIMMERMANN; WATSON ROBERT JAMES ET AL; WATSON ROBERT JAMES; ZEA BERNABE; KENNETH H JOHNSON; JOHNSON KENNETH H; KENNETH H

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

Title: **POLYETHYLENE** FILM WITH IMPROVED PROCESSABILITY AND MECHANICAL PROPERTIES

Abstract: The present invention relates to a film comprising at least one layer comprising an ethylene homo- or copolymer which has a complex **viscosity** at 5 kPa shear stress η' of 200,000 or less and a shear thinning index $SHI(5/300)$ measured at 1900 C as the ratio between the complex **viscosity** at 5 kPa shear stress and the complex **viscosity** at 300 kPa shear stress of 120 or more.

Classifications:

International (IPC 8-9): B29D22/00 B32B27/32 C08F10/02 C08F110/02 C08F297/08 C08J5/18 C08L23/04 (Advanced/Invention); B32B27/32 C08F10/00 C08F110/00 C08F297/00 C08J5/18 C08L23/00 (Core/Invention)

International (IPC 1-7): C08F297/08

CPC: Y10T428/1334 Y10T428/1345 Y10T428/1352 C08F297/083 C08F10/02 C08F210/16 C08F297/08 C08J5/18 C08J2323/06 C08L23/06

European: C08F10/02 C08F297/08 C08F297/08B C08J5/18 M08F210/16 M08J323/06 M08L23/06

US: 428/220 428/220P 428/35.2 428/35.5 428/35.7 525/191 525/240 525/240S 526/352 526/352S

Family:

Publication number	Publication date	Application number	Application date
AT388175 E	20080315	AT20050007986T	20050412
CA2603531 AA	20070928	CA20062603531	20060329
CN101160332 A	20080409	CN200680012061	20060329
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EA200701935 A1	20080428	EA20070001935	20060329
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EP1712574 B1	20080305	EP20050007986	20050412
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ES2298875 T3	20080516	ES20050007986T	20050412
IN07864DN2007 A	20071109	IN2007DN07864	20071011
IN271593 B	20160304	IN2007DN07864	20071011
US2009053495 AA	20090226	US20060918106	20060329
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WO06108512 A1	20061019	WO2006EP02868	20060329

Priority:

EP20050007986 20050412 EP20060707652 20060329 WO2006EP02868 20060329

Probable Assignee: BOREALIS TECHNOLOGY OY

Assignee(s): (std): EGGEN SVEIN STAAL ; EGGEN SVEIN STALL ; HELLAND IRENE ; VAN MARION REMKO ; BOREALIS TECH OY

Assignee(s): BOREALIS TECHNOLOGY OY

Inventor(s): (std): EGGEN SVEIN STAAL ; EGGEN SVEIN STALL ; HELLAND IRENE ; IRENE HELLAND ; REMKO MARION VAN ; STAAL EGGEN SVEIN ; VAN MARION REMKO

Agent(s): RICHES MCKENZIE AND HERBERT LLP; KADOR AND PARTNER; FAY SHARPE 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 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

Title: FIBER REINFORCED POLYPROPYLENE COMPOSITE HEADLINER SUBSTRATE PANEL

Abstract: A fiber reinforced polypropylene composite headliner substrate panel. The headliner substrate panel is molded from a composition comprising at least 30 wt percent polypropylene based resin, from 10 to 60 wt percent organic fiber and from 0 to 40 wt percent inorganic filler, based on the total weight of the composition, the headliner substrate panel having an outer surface and an underside surface. A process for producing a headliner substrate panel for a vehicle is also provided. The process includes the step of molding a composition to form the composite headliner substrate panel, the headliner substrate panel having at least an outer surface and an underside surface, wherein the composition comprises at least 30 wt percent polypropylene, from 10 to 60 wt percent organic fiber and from 0 to 40 wt percent inorganic filler, based on the total weight of the composition.

Classifications:

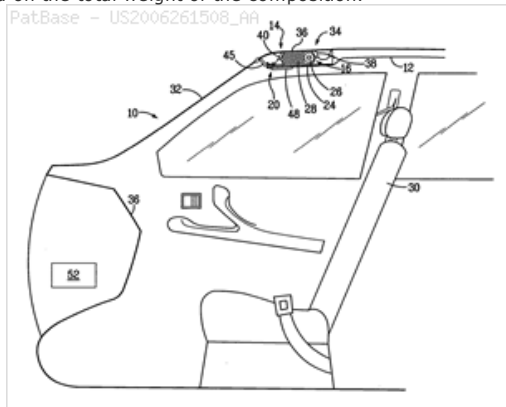
International (IPC 8-9): B05D3/08 B05D3/12 B05D3/14 B05D7/02 B29B7/00 B29B7/46 B29B9/06 B29B9/14 B29C45/00 B29C45/54 B29C47/00 B29C47/60 B29C51/00 B29C70/06 B60J5/04 B60R13/02 B60R21/16 C08J5/04 C08K13/04 C08K3/00 C08K3/22 C08K3/26 C08K3/30 C08K3/34 C08K5/00 C08K5/09 C08K7/02 C08L101/00 C08L23/10 C08L23/12 C08L23/14 C08L67/02 (Advanced/Invention); B05D3/08 B05D3/12 B05D3/14 B05D7/02 B29B7/00 B29B7/34 B29B9/02 B29B9/12 B29C45/00 B29C45/53 B29C47/00 B29C47/60 B29C51/00 B29C70/06 B60J5/04 B60R13/02 B60R21/16 C08J5/04 C08K13/00 C08K3/00 C08K5/00 C08K7/00 C08L101/00 C08L23/00 C08L67/00 (Core/Invention)

International (IPC 1-7): C08J5/04 C08L23/10

CPC: B29C45/542 B60J5/0416 B62D29/043 C08L77/00 B60R13/02 B29K2105/12 B29C47/1018 B05D3/08 B05D3/144 B05D7/53 B05D2201/00 C08J7/123 B29C70/02 B60R13/0225 B60R21/20 B60R2013/0287 B29C47/0004 B29C47/0014 B29C47/1045 B29K2105/06 B29K2105/16 C08K3/34 C08K7/02 C08K7/10 C08L23/0815 C08L23/16 C08L2203/12 C08L2205/03 B29B7/90 B29B9/14 B29C45/0001 B29C45/0013 B29C47/38 B29C47/402 B29C47/404 B29K2105/08 B29K2267/00 B29K2277/00 B29K2823/12 B29L2031/3044 B29C47/6025 B29C47/6056 B29C47/6031 B29C47/369 B29C45/0005 B29C2045/466 B29K2023/12 B29L2031/3011 C08J3/201 B29C47/92 B29C47/1081 C08K3/01 C08K3/013 C08L67/02 C08F255/02 C08F255/00 C08J5/046 C08J5/047 C08J2323/10 C08K3/00 C08K5/00 C08L23/10 C08L23/12 C08L33/20 C08L51/06 C08L67/00 C08L2205/16

European: B05D3/08 B05D7/53 B29B7/90 B29B9/14 B29C45/00B B29C45/00D B29C45/00E B29C45/54C B29C47/00B B29C47/10J4 B29C47/10P B60J5/04D4 B60R13/02 B60R13/02C2 B62D29/04B C08F255/00 C08F255/02 C08J3/20E C08J5/04L C08J5/04M C08J7/12A C08K3/00P C08K3/34 C08K5/00 C08K7/02 C08L23/10 C08L23/12 C08L51/06 C08L67/02 L05D201/00 L05D3/14C3C L05D7/53 L29C45/00E L29C45/46F L29C47/10J4 L29C47/38 L29C47/40E L29C47/40F L29C70/02 L29K105/06 L29K105/08 L29K105/16 L29K23/12 L29K267/00 L29K277/00 L29K823/12 L29L31/30B4 L29L31/30C L60R13/02R L60R21/20 M08J323/10 M08K3/00 M08K3/00P5 M08K3/34 M08K7/10 M08L203/12 M08L205/03 M08L205/16 M08L23/08A1 M08L23/10 M08L23/12 M08L23/16 M08L33/20 M08L51/06 M08L67/00 M08L77/00

US: 264/140 264/140P 264/143 264/143P 264/164 264/176.1 264/211 264/211.23 264/211.230S 264/211S 264/328.18 264/328.180S 264/544 264/544S 264/546 264/546S 427/322 427/322P 524/284 524/284S 524/35 524/35P 524/413 524/413S 524/423 524/423S 524/424 524/424S 524/425 524/425S 524/427 524/427S 524/430 524/430S 524/431 524/431S 524/432 524/432S 524/433 524/433S 524/436 524/445 524/445S 524/447 524/447S 524/449 524/449S 524/451 524/451S 524/456 524/456S 524/487 524/487S 524/492 524/493 524/493S 524/497 524/502 524/502S 524/513 524/522 524/528 524/582 524/583

**Family:**

Publication number	Publication date	Application number	Application date
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Priority:

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Probable Assignee: EXXON MOBIL CORP

Assignee(s): (std): EXXNONMOBIL RES AND ENGINEERIN ; BORMANN PATRICK ; EXXONMOBIL RES AND ENG CO ; VALENTAGE JEFFREY ; LUSTIGER ARNOLD ; VALLENTAGE JEFFREY ; MATUSZEK WALTER T ; MATUSZEK WALTER ; MACHADO AUGIE ; LUSTIGER AMOLD ; STARZ DAVID JON ; WARD JENNIFER HARTING ; OSHINSKI ALAN J ; WARD JENNIFER H ; EXXONMOBIL CHEM PATENTS INC ; EXXONMOBIL RESEARCH AND ENGINEERING CORP ; EXXONMOBIL RES AND ANGINEERING CO

Assignee(s): EXXONMOBIL RESEARCH AND ANGINEERING CO ; EXXON MOBIL CORP ; EXXONMOBIL CHEMICAL PATENTS INC ; EXXONMOBIL CHEMICAL PATENT INC ; ENGINEERING CO ; EXXNONMOBIL RESEARCH AND ENGINEERING CO ; EXXNONMOBIL RESEARCH AND ENGINEERING COMPANY ; EXXONMOBIL RESEARCH AND ENGINEERING CO ; EXXONMOBIL RESEARCH AND ENGINEERING COMPANY

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Inventor(s): WALTER T MATUSZEK

Agent(s): BORDEN LADNER GERVAIS LLP; GERSTBERGER GISELA ET AL; GERSTBERGER GISELA; EXXONMOBIL RESEARCH AND ENGINEERING COMPANY; EXXONMOBIL RESEARCH AND ENGINEERING CO; EXXONMOBILE RESEARCH AND ENGINEERING COMPANY; EXXONMOBILE RESEARCH AND ENGINEERING CO; EXXONMOBIL CHEMICAL COMPANY; EXXONMOBIL CHEMICAL CO; MIGLIORINI ROBERT A; ROBERT A; CATHERINE L; DARRYL M; KRISTINA M; MIGLIORINI ROBERT A ET AL; BAKUN ESTELLE C 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 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 YU ZA ZM ZW

Title: POLYMERIZATION CATALYSTS AND PROCESS FOR PRODUCING BIMODAL POLYMERS IN A SINGLE REACTOR

Abstract: Catalyst compositions comprising a first **metallocene** compound, a second **metallocene** compound, an activator-support, and an organoaluminum compound are provided. Methods for preparing and using such catalysts to produce polyolefins are also provided. The compositions and methods disclosed herein provide ethylene polymers having a HLMI of from about 0.5 to about 25, a polymer density of from about 0.920 to about 0.965, and a polydispersity of from about 3.0 to about 30.

Classifications:

International (IPC 8-9): B01J31/00 B01J31/14 B01J31/22 B01J31/38 B29C47/20 C07F17/00 C07F7/00 C08F10/00 C08F10/02 C08F2/00 C08F2/04 C08F2/06 C08F2/34 C08F210/16 C08F4/44 C08F4/52 C08F4/64 C08F4/642 C08F4/646 C08F4/65 C08F4/659 C08F4/6592 C08F4/76 C08L23/04 C08L23/08 C08L23/18 F16L47/00 F16L9/12 (Advanced/Invention); B01J31/14 B01J31/22 C08F10/00 C08F10/02 C08F4/65 C08F4/659 C08F4/6592 C08L23/04 C08L23/08 F16L47/00 (Advanced/Non-invention); B01J31/00 B01J31/12 B01J31/16 B01J31/26 C07F17/00 C07F7/00 C08F10/00 C08F2/00 C08F4/00 C08L23/00 F16L47/00 F16L9/00 (Core/Invention); B01J C07F C08F (Subclass/Invention)

International (IPC 1-7): B01J31/14 B01J31/22 B01J31/38 C07F17/00 C08F10/00 C08F10/02 C08F4/6592 C08F4/76 C08L23/08 C08L23/18 F16L9/12

CPC: Y10S526/943 Y10S526/941 C08F4/65916 C08F210/00 B01J31/2295 B01J31/143 B01J2531/0263 B01J2531/48 B01J2531/49 C08F4/65912 C08F4/65925 C08F4/65927 Y10T428/139 C08F210/16 C08L23/0807 C08L23/0815 C08L2205/02 C08F10/00

European: B01J31/14B B01J31/22D6 C08F10/00 C08F210/16 C08L23/08A1 L01J531/02H2 L01J531/48 L01J531/49 M08F210/00 M08F210/16 M08F4/6592B2 M08F4/6592B4 M08F4/659K M08F4/659L M08L205/02 M08L23/08A

US: 138/178 428/36.9 502/103 502/103S 502/113 502/113S 502/117 502/117S 502/129 502/152 525/240 526/112 526/112S 526/113 526/113S 526/114 526/114S 526/116 526/118 526/118S 526/119 526/119P 526/119S 526/126 526/127 526/127S 526/129 526/129S 526/130 526/134 526/135 526/137 526/144 526/156 526/156S 526/160 526/160S 526/170 526/170S 526/195 526/195S 526/346 526/348 526/348.2 526/348.3 526/348.4 526/348.5 526/348.500S 526/348.6 526/348.600S 526/351 526/352 526/352.2 526/64 526/64P 526/901 526/901S 526/941 526/943 526/943S 556/51 556/52 556/52S 556/53 556/53P

PatBase - US2007043176_AA

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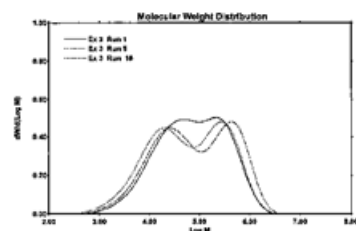


FIG. 1

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Priority:

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Probable Assignee: CHEVRON PHILLIPS CHEMICAL CO LP

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MAKDEHNIEL MAK S P ; MARTIN JOEL ; MARTIN JOEL L ; MCDANIEL MAX ; MCDANIEL MAX P ; MARTIN
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; YANG QING

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MCDANIEL ; MARK E KERTOK ; LANIER J TODD BARTLESVILLE ; LANIER JERRY T ; LAN'ER DZH. TODD ;
LANIER J ; KUMUDINI C JAYARATNE ; KUMUNDINI C JAYARATNE ; KRISHNASWAMY RAJENDRA ; KERTOK
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; JAYARATNE KUMUDINI ; J TODD LANIER ; DESLAURIERS PAUL J BARTLESVILLE

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; FINLAYSON AND SINGLEHURST; REHBERG
HUEPPE AND PARTNER PATENTANWAELTE PARTG MBB; ANDRAE WESTENDORP PATENTANWAELTE
PARTNERSCHAFT; PATENTANWAELTE HENKEL BREUER AND PARTNER; STEVENS IAN EDWARD ET AL;
POTTER CLARKSON LLP; STEVENS IAN EDWARD; URIZAR JOSE ANTONIO; VALLEJO JUAN PEDRO; ASAMURA
KIYOSHI; ASAMURA HAJIME; WOMBLE CARLYLE SANDRIDGE AND RICE PPLC, CHEVRON PHILLIPS
CHEMICAL COMPANY LP; WOMBLE CARLYLE SANDRIDGE AND RICE PPLC CHEVRON PHILLIPS CHEMICAL
CO LP; CHEVRON PHILLIPS CHEMICAL COMPANY; CHEVRON PHILLIPS CHEMICAL CO; MERCHANT AND
GOULD CHEVRON PHILLIPS; MERCHANT AND GOULD; MERCHANT AND GOULD LLC; MERCHANT AND GOULD
PC; CONELY; RODNEY B; CHERYL L

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
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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

Title: POLYMERIC PIPE AND METHOD OF MAKING A POLYMERIC PIPE

Abstract: A method for making a **polyethylene** pipe, the method comprising preparing a polymer by adding greater than 0 and less than about 1000 ppm peroxide to a **polyethylene** resin and forming the polymer into a pipe. **Polyethylene** comprising greater than 0 and less than about 1000 ppm peroxide and having a **tensile** modulus of about equal to or greater than about 90 percent of the **tensile** modulus of an otherwise same polymer without peroxide. A uniaxially oriented **polyethylene** pipe comprising greater than 0 and less than about 1000 ppm peroxide.

Classifications:

International (IPC 8-9): B32B27/08 (Advanced/Invention); B32B27/08 (Core/Invention)

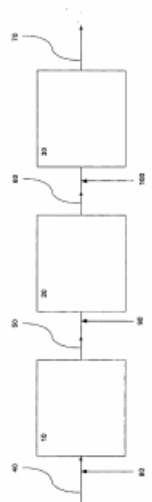
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European: C08K5/14 F16L9/12 L29C47/00B L29C47/00J6 L29C47/00L8 L29C55/24 L29K105/00E10 L29K105/00E18 L29K105/00E2 L29K23/06 L29K23/06B L29K23/06B3 L29K23/06B5 L29K23/06B7 L29K23/06B9 L29K995/00F10B L29L23/22 M08L23/06

US: 428/35.7 428/35.700P 525/333.7 525/333.700S 525/387 525/387S

PatBase - US2007048472_AA

Patent Application Publication Mar. 1, 2007 Sheet 1 of 2 US 2007/0048472 A1



Family:

Publication number	Publication date	Application number	Application date
US2007048472 AA	20070301	US20050215500	20050830

Priority:

US20050215500 20050830

Probable Assignee: CHEVRON PHILLIPS CHEMICAL CO LP

Assignee(s): (std): KRISHNASWAMY RAJENDRA K ; ROHLFING DAVID C

Assignee(s): CHEVRON PHILLIPS CHEMICAL CO ; CHEVRON PHILLIPS CHEMICAL CO LP

Inventor(s): (std): KRISHNASWAMY RAJENDRA K ; ROHLFING DAVID C

Agent(s): CHEVRON PHILLIPS CHEMICAL COMPANY

Title: **POLYETHYLENE** COMPOSITIONS AND PIPE MADE FROM SAME

Abstract: A polymer composition comprising a density equal to or greater than about 0.947 g/cc, a high load melt index from about 1 g/10 min to about 30 g/10 min, and a **tensile** natural draw ratio less than about 14167rho-12958, where rho is the density (g/cc) of the composition. A polymer composition comprising a **tensile** natural draw ratio less than about 14167rho-12958, where rho is the density (g/cc) of the composition and wherein less than about 1 weight percent of the composition comprises non-polymeric additives.

Classifications:

International (IPC 8-9): A61K9/16 C08F10/00 C08F10/02 C08F210/02 C08F210/16 C08F4/645 C08L101/00 C08L101/12 C08L23/00 C08L23/04 C08L23/06 C08L23/08 F16L9/12 (Advanced/Invention); C08F10/02 C08F210/02 C08L23/06 F16L9/12 (Advanced/Non-invention); A61K9/16 C08F10/00 C08F210/00 C08L101/00 C08L23/00 F16L9/00 (Core/Invention)

International (IPC 1-7): C08F10/00 C08F210/16 C08L23/06 F16L9/12

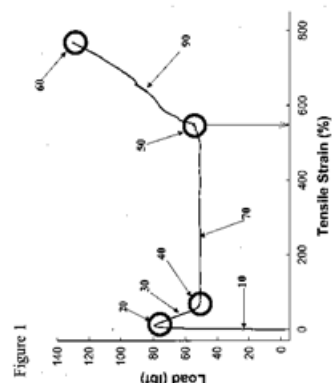
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European: C08F210/16 C08L101/00 C08L23/06 F16L9/127 M08F210/16

US: 428/34.1 428/34.100S 428/36.8 524/543 526/113 526/114 526/118 526/119 526/348 526/348.2 526/348.200S 526/348.3 526/348.300S 526/348.4 526/348.5 526/348.500S 526/348.6 526/348.600S

PatBase - US2007197716_AA

Patent Application Publication Aug. 23, 2007 Sheet 1 of 4 US 2007/0197716 A1



Family:

Publication number	Publication date	Application number	Application date
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Priority:

US20060358959 20060222 WO2007US62546 20070222

Probable Assignee: CHEVRON PHILLIPS CHEMICAL CO LP

Assignee(s): (std): CHEVRON PHILLIPS CHEMICAL CO ; ROHLFING DAVID C ; JAYARATNE KUMUDINI C ; KRISHNASWAMY RAJENDRA K ; YANG QING ; FRENCH JIM E ; MCDANIEL MAX P ; CHEVRON PHILIPS CHEMICAL COMPA

Assignee(s): CHEVRON PHILIPS CHEMICAL COMPANY LP ; CHEVRON PHILIPS CHEMICAL CO LP ; CHEVRON PHILLIPS CHEMICAL CO LP ; CHEVRON PHILLIPS CHEMICAL COMPANY LP

Inventor(s): (std): FRENCH JIM ; FRENCH JIM E ; JAYARATNE KUMUDINI ; JAYARATNE KUMUDINI C ; JAYARATNE KUMUDINI C ; KRISHNASWAMY RAJENDRA ; KRISHNASWAMY RAJENDRA K ; MCDANIEL MAX ; MCDANIEL MAX P ; QING YANG ; ROHLFING DAVID C ; ROHLFING DAVID ; ROHLFING DAVID C ; YANG QING

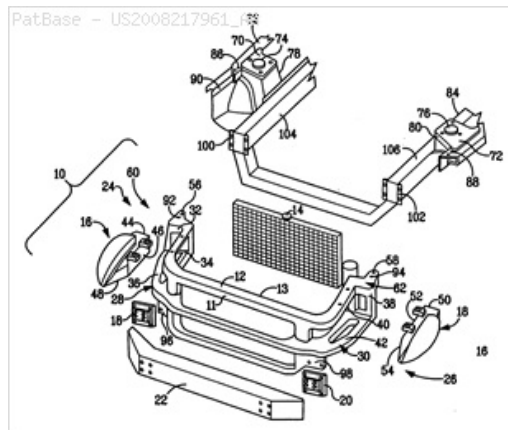
Inventor(s): RAJENDRA K KRISHNASWAMY ; KRISHSWAMY RAJENDRA ; KUMUDINI C JAYARATNE ; KUMUDINI C JAYRATNE ; MAX P MCDANIEL ; JIM E FRENCH ; DAVID C ROHLFING ; DAVID C ROLFING

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; FINLAYSON AND SINGLEHURST; CLARKE MODET; STEVENS IAN EDWARD ET AL; STEVENS IAN EDWARD; SAUD M A SHAWWAF LAW OFFICE; ASAMURA KIYOSHI; IKEDA YUKIHIRO; NAGANUMA TERUO; ASAMURA PATENT OFFICE PC; ASAMURA HAJIME; CHEVRON PHILLIPS CHEMICAL COMPANY; CHEVRON PHILLIPS CHEMICAL CO; CONLEY ROSE PC; RODNEY B; CHERYL L

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

Abstract: A fiber reinforced polypropylene composite front end module. The front end module includes a radiator mounting frame molded from a composition comprising at least 30 wt percent polypropylene based resin, from 10 to 60 wt percent organic fiber, from 0 to 40 wt percent inorganic filler, and from 0 to 0.1 wt percent lubricant, based on the total weight of the composition, the radiator mounting frame having at least a first side and a second side. A process for producing a front end module is also provided. The process includes the step of injection molding a composition to form the front end module, the front end module having a radiator mounting frame having at least a first side and a second side, wherein the composition comprises at least 30 wt percent polypropylene, from 10 to 60 wt percent organic fiber, from 0 to 40 wt percent inorganic filler, and from 0 to 0.1 wt percent lubricant, based on the total weight of the composition.

US: 29/897.2 296/193.09



Publication number	Publication date	Application number	Application date
US2008217961 AA	20080911	US20080074594	20080305
WO08109093 A1	20080912	WO2008US02897	20080305

US20070905263P 20070306 US20080074594 20080305

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 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

Title: Polyethylene compositions and their use in the manufacture of pipes

Abstract: The invention relates to a polyethylene composition with a bimodal molecular weight distribution comprising at least a low molecular weight (LMW) component and a high molecular weight (HMW) ethylene copolymer component, wherein the polyethylene composition has a ductile-brittle transition temperature of less than -20 degrees centigrade, a total impact Charpy energy of more than 200 J/m at 23 degrees centigrade according to ASTM D6110-2004e1, and a PENT test value of more than 750 hours according to ASTM F1473: 2001, and the LMW component has a comonomer content of less than 0.1 branches per 1000 carbon atoms as determined by 13 C NMR spectroscopy and a double bond final chain content between 0.2 to 10 double bonds per 1000 carbon atoms, as determined by 13 C NMR spectroscopy. The invention also relates to a process for preparing said composition and its use in the manufactures of pipes.

Classifications:

International (IPC 8-9): C08F10/02 C08L23/08

F16L9/12 (Advanced/Invention)

CPC: C08F4/65912 C08F4/65916 C08F4/65927 C08F10/00 C08F210/16

C08L23/06 C08L23/0815 C08L2314/06

European: C08F10/00 C08F210/16 C08L23/08A1 M08F210/16

M08F4/6592B4 M08F4/659K M08F4/659L M08L23/06 M08L23/08A1

M08L314/06

Figure 1 - EP2003166_A1

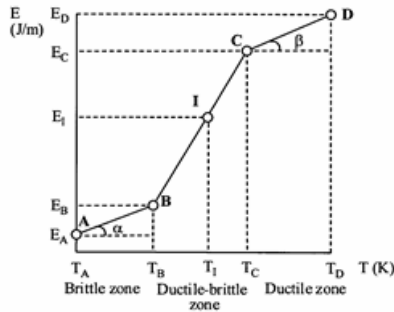
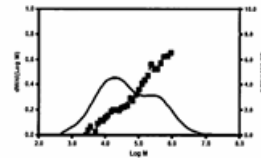


Figure 2



Family:

Publication number	Publication date	Application number	Application date
EP2003166 A1	20081217	EP20070380172	20070612

Priority:

EP20070380172 20070612

Probable Assignee: REPSOL YPF SA

Assignee(s): (std): REPSOL YPF S A ; REPSOL YPF SA

Inventor(s): (std): CAMPORA PEREZ JUAN ; LOPEZ REYES MANUEL ; MARTIN MARCOS CARLOS ; NAZ LUCENA ANTONIO MARCOS ; PALMA RAMIREZ PILAR ; PEREZ RODRIGUEZ CARMEN MARIA ; PRIETO ACEDO OSCAR ; SANCHO ROYO JOSE

Agent(s): ABG PATENTES SL

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL PL PT RO RS SE SI SK TR

Title: ARTICLE COATED WITH A COMPOSITION COMPRISING **POLYETHYLENE** PREPARED WITH A SINGLE SITE CATALYST

Abstract: The present invention relates to an article coated with a composition comprising (A) an ethylene homo- or copolymer resin which has been prepared by using a single-site catalyst further characterized in that component (A) has an MFR21, measured according to ISO 1133 at 190 degrees centigrade and under a load of 21.6 kg, from 0.01 to 20 g/10 min. The present invention further relates to an article coated with a composition comprising (A) an ethylene homo- or copolymer resin which has been prepared by using a single-site catalyst further characterized in that component (A) has an impact **strength** at -40 degrees centigrade of at least 80 kJ/m2 in a **Charpy** notched test according to ISO ISO 179-1/1eA:2000 with a pendulum energy of 15 J. The invention is furthermore directed to the use of the composition for the coating of an article.

Classifications:

International (IPC 8-9): B05D3/10 B32B1/08 C08F10/02 C08L23/04 C08L23/06 C09D123/04 C09D123/06 C09D123/08 F16L58/04 (Advanced/Invention);

C08F10/02 C08L23/04 C09D123/04 F16L58/04 (Advanced/Non-invention);
C08L23/00 C09D123/00 (Core/Invention)

CPC: C08L23/06 C09D123/06 C08L2666/06 Y10T428/1393 C09D123/04 C08L23/04

European: C08L23/04 C08L23/06 C09D123/04 C09D123/06

US: 1/1 427/302 427/302S 428/36.91 428/36.910P 524/570 524/570S 524/585 524/585S

Family:

Publication number	Publication date	Application number	Application date
CA2748723 AA	20100708	CA20092748723	20091125
CA2748723 C	20131112	CA20092748723	20091125
EA021158 B1	20150430	EA20110070907	20091125
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EP2370514 A1	20111005	EP20090759684	20091125
EP2370514 B1	20170104	EP20090759684	20091125
KR101310687 B1	20130924	KR20117014952	20091125
KR20110091033 A	20110810	KR20117014952	20091125
US2011250374 AA	20111013	US20090140342	20091125
US9353283 BB	20160531	US20090140342	20091125
WO10075914 A1	20100708	WO2009EP08396	20091125

Priority:

EP20080022586 20081231 EP20090759684 20091125 WO2009EP08396 20091125

Probable Assignee: BOREALIS AG

Assignee(s): (std): ANKER MARTIN ; BOREALIS AG ; JOHANSSON SOLVEIG ; VOIGT BJOERN ; PALMLOEF MAGNUS

Assignee(s): PALMLOF MAGNUS ; VOIGT BJORN

Inventor(s): (std): ANKER MARTIN ; JOHANSSON SOLVEIG ; PALMLOEF MAGNUS ; PALMLOF MAGNUS ; PALMOEF MAGNUS ; VOIGT BJOEM ; VOIGT BJOERN ; VOIGT BJORN

Agent(s): GOWLING LAFLEUR HENDERSON LLP; KADOR AND PARTNER; ROBERTS MLOTKOWSKI SAFRAN AND COLE PC

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 TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: GOLF BALL WITH A NON-IONOMERIC INNER COVER, STIFF TPU INTERMEDIATE COVER, AND CAST THERMOSET OUTER COVER

Abstract: A golf ball including a core and a cover disposed about the core. The cover includes a thermoplastic inner cover layer having a hardness between 55 and 60 Shore D; an outer cover layer having a hardness between 55 and 60 Shore D; and a stiff intermediate cover layer disposed between the inner and outer cover layers and having a hardness greater than the inner cover layer and the outer cover layer. The inner cover layer is formed from a non-ionomeric composition including a non-ionomeric stiffening polymer and at least one E/Y copolymer or E/X/Y terpolymer, where E is an olefin, Y is a carboxylic acid, and X is a softening comonomer. The intermediate cover layer is formed from a stiff thermoplastic polyurethane or polyurea composition and the cover outer cover layer is formed from a thermoset polyurethane, a polyurea, or a urethane-urea blend.

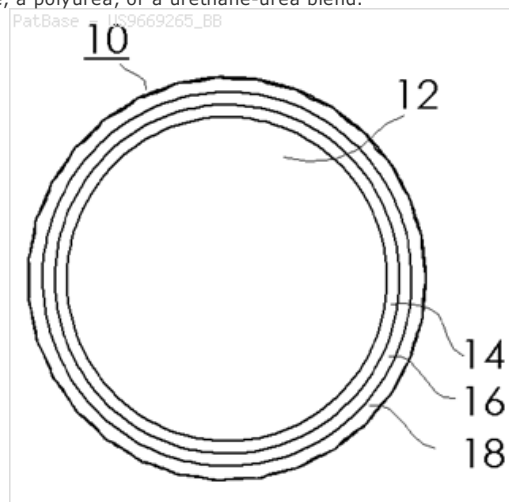
Classifications:

International (IPC 8-9): A63B37/00 A63B37/02 A63B37/06 A63B37/12 C08K5/00 C09D123/08 (Advanced/Invention); A63B37/00 A63B37/12 (Core/Invention)

CPC: A63B37/0076 A63B37/0049 A63B37/0027 A63B37/0024 A63B37/003 A63B37/0075 C08K5/0016 C09D123/0876 C08K5/101 C08L67/025 A63B37/0031 A63B37/0033 A63B37/0039 A63B37/0043 A63B37/0045 A63B37/0062 A63B37/0092 C08L77/00 C08L23/0876

European: A63B37/00G12B4 A63B37/00G12D28 A63B37/00G6D4 A63B37/00G6D6 A63B37/00G8D4 A63B37/00G8D6

US: 1/1 473/376 473/377 473/377P 473/378 473/378S



Family:

Publication number	Publication date	Application number	Application date
US2010234140 AA	20100916	US20090403713	20090313
US2012238379 AA	20120920	US20120487480	20120604
US2013130840 AA	20130523	US20120723433	20121221
US2015005107 AA	20150101	US20140487225	20140916
US2015111669 AA	20150423	US20140584379	20141229
US2016256749 AA	20160908	US20160155227	20160516
US2017266507 AA	20170921	US20170612742	20170602
US8202176 BB	20120619	US20090403713	20090313
US8337333 BB	20121225	US20120487480	20120604
US8834301 BB	20140916	US20120723433	20121221
US9339696 BB	20160517	US20140584379	20141229
US9669265 BB	20170606	US20140487225	20140916

Priority:

US20090403703 20090313	US20090403713 20090313	US20120487480 20120604
US20120723433 20121221	US20140487225 20140916	US20140584379 20141229
US20160155227 20160516	US20170612742 20170602	

Probable Assignee: ACUSHNET CO

Assignee(s): (std): BINETTE MARK L ; BULPETT DAVID A ; COMEAU BRIAN ; SULLIVAN MICHAEL J ; ACUSHNET CO

Assignee(s): ACUSHNET COMPANY ; KOREA DEVELOPMENT BANK NEW YORK BRANCH ; WELLS FARGO BANK NATIONAL ASSOCIATION ADMINISTRATIVE AGENT AS

Inventor(s): (std): BINETTE MARK L ; BLINK ROBERT ; BULPETT DAVID A ; COMEAU BRIAN ; SULLIVAN MICHAEL J ; CORNEAU BRIAN

Agent(s): ACUSHNET COMPANY; ACUSHNET CO; WILLIAM B

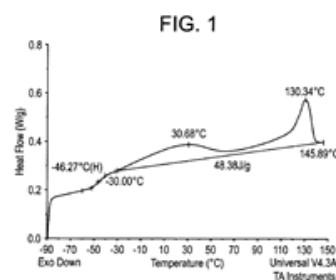
Title: BLOCK COMPOSITES IN SOFT COMPOUNDS**Abstract:** Embodiments of the invention provide block composites and their use in soft compounds.**Classifications:****International (IPC 8-9):** C08F8/00 C08J5/00 C08L23/00 C08L23/02 C08L23/10 C08L23/12 C08L23/14 C08L23/16 C08L53/00 C08L53/02 C08L9/00 (Advanced/Invention);

B82Y30/00 (Advanced/Non-invention)

CPC: C08L23/0815 C08L23/142 C08L2207/02 C08L2314/06 C08L23/14 C08L23/10 C08L23/16 C08L91/06 C08L2205/03 C08L2207/10 C08J5/00 C08F297/083 C08K3/013 C08K5/01 C08L23/00 C08L23/06 C08L23/12 C08L53/00**European:** C08F297/08B C08L23/00 C08L23/10 C08L23/14 C08L23/16 C08L53/00 M08K3/00P5 M08K5/01 M08L205/03 M08L207/02 M08L207/10 M08L23/06 M08L23/08A1 M08L23/10 M08L23/12 M08L23/14A M08L23/16 M08L314/06 M08L53/00 M08L91/06**US:** 524/505 524/528 524/528S 524/570 524/570S 525/191 525/232 525/240 525/323 525/324 525/332.5 525/55 525/55S 525/88 525/88P 525/88S 525/89 525/89P 525/95 525/98 977/700 977/700S

PatBase - US2011082249_AA

Patent Application Publication Apr. 7, 2011 Sheet 1 of 17 US 2011/0082249 A1

**Family:**

Publication number	Publication date	Application number	Application date
■ CN102712795 A	20121003	CN201080054859	20101001
■ CN102712795 B	20151021	CN201080054859	20101001
■ CN102712796 A	20121003	CN201080054853	20101001
■ CN102712796 B	20150527	CN201080054853	20101001
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■ CN102770487 B	20141001	CN201080054861	20101001
■ DE602010039814 D1	20170309	DE201060039814T	20101001
■ DE602010039821 D1	20170309	DE201060039821T	20101001
■ EP2483348 A1	20120808	EP20100771836	20101001
■ EP2483348 B1	20170125	EP20100771836	20101001
■ EP2483349 A1	20120808	EP20100779866	20101001
■ EP2483349 B1	20170125	EP20100779866	20101001
■ EP2483352 A1	20120808	EP20100763298	20101001
■ JP2013506742 T2	20130228	JP20120532358T	20101001
■ JP2013506743 T2	20130228	JP20120532360T	20101001
■ JP2013506744 T2	20130228	JP20120532361T	20101001
■ JP5693590 B2	20150401	JP20120532361T	20101001
■ JP5806218 B2	20151110	JP20120532358T	20101001
■ KR101794109 B1	20171106	KR20127011316	20101001
■ KR101794361 B1	20171106	KR20127011317	20101001
■ KR101795085 B1	20171107	KR20127011318	20101001
■ KR20120082907 A	20120724	KR20127011316	20101001
■ KR20120090076 A	20120816	KR20127011317	20101001
■ KR20120093249 A	20120822	KR20127011318	20101001
■ US2011082249 AA	20110407	US20100896553	20101001
■ US2011082257 AA	20110407	US20100896538	20101001
■ US2011082258 AA	20110407	US20100896585	20101001
■ US2012208946 AA	20120816	US20100499859	20101001
■ US2012208961 AA	20120816	US20100499857	20101001
■ US2012208962 AA	20120816	US20100499862	20101001
■ US8476366 BB	20130702	US20100896585	20101001
■ US8563658 BB	20131022	US20100499862	20101001
■ US8686087 BB	20140401	US20100896553	20101001
■ US8716400 BB	20140506	US20100896538	20101001
■ US8802774 BB	20140812	US20100499857	20101001
■ WO11041696 A1	20110407	WO2010US51154	20101001
■ WO11041698 A1	20110407	WO2010US51159	20101001
■ WO11041699 A1	20110407	WO2010US51160	20101001

Priority:

US20090248170P	20091002	US20090248147P	20091002	US20090248160P	20091002
EP20100771836	20101001	EP20100779866	20101001	US20100499857	20101001
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WO2010US51154	20101001	WO2010US51159	20101001	WO2010US51160	20101001
US20100499859	20101001	US20100499862	20101001		

Probable Assignee: DOW GLOBAL TECHNOLOGIES LLC

Assignee(s): (std): BATRA ASHISH ; CARNAHAN EDMUND M ; DOW GLOBAL TECHNOLOGIES INC ; DOW GLOBAL TECHNOLOGIES LLC ; MARCHAND GARY R ; LIPISHAN COLIN ; POON BENJAMIN C ; ONER DELIORMANLI DIDEM ; HUSTAD PHILLIP D ; JAZDZEWSKI BRIAN A ; LI PI SHAN COLIN ; GARCIA MEITIN EDDY I ; JOHNSTON ROBERT T ; WALTON KIM L ; WEINHOLD JEFFREY D ; WALTHER BRIAN W ; WU XIAOSONG ; REGO JOSE M ; WU XIAOSONG SHARON ; SHAN COLIN LI PI

Assignee(s): DOW GLOBAL TECHNOLOGIES LLC MIDLAND

Inventor(s): (std): ASHISH BATRA ; BATRA ASHISH ; CARNAHAN EDMUND M ; COLIN LI PI SHAN ; COLIN LIPISHAN ; DIDEM ONER DELIORMANLI ; GARCIA MEITIN EDDY I ; HUSTAD PHILLIP D ; JAZDZEWSKI BRIAN A ; JOHNSTON ROBERT T ; LI PI SHAN COLIN ; LIPISHAN COLIN ; MARCHAND GARY R ; ONER DELIORMANLI DIDEM ; POON BENJAMIN C ; REGO JOSE M ; SHAN COLIN LI PI ; WALTHER BRIAN W ; WALTON KIM L ; WEINHOLD JEFFREY D ; WU XIAOSONG ; WU XIAOSONG SHARON ; XIAOSONG WU

Agent(s): MURGITROYD AND CO; JANSEN CORNELIS MARINUS; VO; KOBAYASHI HIROSHI; OHMORI NORIO; CARNAHAN JENNIFER

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

Title: OXYGEN SCAVENGERS

Abstract: Described herein are oxygen scavengers, oxygen scavenging polymeric compositions, and oxygen scavenging articles. The polymeric compositions comprising the oxygen scavengers may have utility in packaging, sealing, wrapping, and storing oxygen-sensitive substances, e.g., to preserve freshness of foods, beverages, and the like.

Classifications:

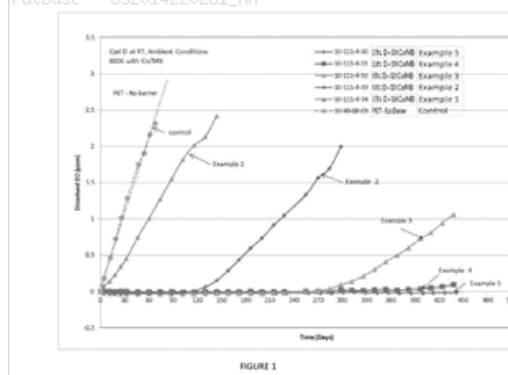
International (IPC 8-9): B65D81/00 B65D81/26 C07C29/14 C07C29/147 C07C29/17 C07C31/135 C07C31/27 C07C41/03 C07C43/11 C07C45/69 C07C61/22 C07C67/08 C07C67/303 C07C67/347 C07C69/75 C07C69/757 C07D303/06 C07D307/88 C07D307/89 C07D493/04 C08G63/183 C08K5/00 C08K5/12 C08L67/02 C09K15/04 C10M105/00 (Advanced/Invention)

CPC: C08K5/0008 C08K5/01 C08K5/09 C08K5/098 C08K5/10 C08K5/1539 C08K2201/012 C07D307/88 C07C46/00 C07C47/32 C07C50/20 C10M105/12 C10M105/14 C10M105/20 C10M105/26 C10M105/34 C10M105/36 C10M109/02 C10M2207/0203 C10M2207/0225 C10M2207/08 C10M2207/085 C10M2207/1253 C10M2207/126 C10M2207/1273 C10M2207/1293 C10M2207/2815 C10N2230/02 C10N2230/10 C10N2230/64 C10N2260/02 C07C31/1355 C07C29/14 C07C29/147 C07C29/172 C07C29/175 C07C31/276 C07C41/03 C07C43/11 C07C45/69 C07C67/303 C07C67/347 C07C69/75 C07C69/757 C07D303/42 C07D493/04 C08G65/2606 C11D1/00 C11D1/06 C11D1/10 C11D1/123 C11D1/28 C11D1/40 C11D1/523 C11D1/525 C11D1/62 C11D1/662 C11D1/667 C11D1/72 C11D1/75 C11D1/88 C11D3/2024 C11D3/2051 B65D81/267 C07D307/89 Y10T428/13 Y10T428/1397 C07C2601/14 C07C2601/16 C07C2603/24

European: C07C29/14 C07C29/147 C07C29/17A C07C29/17C C07C31/135A C07C31/27A2 C07C41/03 C07C43/11 C07C45/69 C07C67/303 C07C67/347 C07C69/75 C07C69/757 C07D303/42 C07D307/89 C07D493/04 C11D1/00 C11D1/06 C11D1/10 C11D1/12B C11D1/28 C11D1/40 C11D1/52D C11D1/52H C11D1/62 C11D1/66B C11D1/66E C11D1/72 C11D1/75 C11D1/88 C11D3/20B1C C11D3/20B2C M07C101/14 M07C101/16 M07C103/24

US: 428/34.1 428/36.92 428/542.8

PatBase - US2014220281_AA

**Family:**

Publication number	Publication date	Application number	Application date
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MX2014002154 A1	20140922	MX20140002154	20120718
US2014220281 AA	20140807	US20120240612	20120718
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Probable Assignee: FE POLYTECH LLC

Assignee(s): (std): MCPHEE DEREK JAMES ; WOOLARD FRANK X ; ZHU WENXIA ; MORFORD ROBERT ; FERRARI GIANLUCA ; SAFIR ADAM ; M AND G USA CORP ; AMYRIS INC ; BATZEL DANIEL ; BLACK D JEFFREY

Assignee(s): FE POLYTECH LLC ; APG POLYTECH LLC ; TRIMONT REAL ESTATE ADVISORS LLC

Inventor(s): (std): BATZEL DANIEL ; BLACK D JEFFREY ; FERRARI GIANLUCA ; MCPHEE DEREK JAMES ; MORFORD ROBERT ; SAFIR ADAM ; WOOLARD FRANK X ; ZHU WENXIA

Inventor(s): WENXIA ZHU ; ADAM SAFIR ; ROBERT MORFORD ; GIANLUCA FERRARI ; D JEFFREY BLACK ; DANIEL BATZEL

Agent(s): GERBINO ANGELO; ANDREWS DJANGO H ET AL; PATHAK RAHUL ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN 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

Title: CONTROLLING MELT FRACTURE IN BIMODAL RESIN PIPE

Abstract: A method of improving processing of polyethylene resins comprising obtaining a plurality of multimodal metallocene-catalyzed polyethylene samples measuring the shear stress as a function of shear rate for the plurality of multimodal metallocene-catalyzed polyethylene samples using capillary rheometry wherein the measuring yields values for a magnitude of slip-stick, a stress for smooth to matte transition, and a shear rate for smooth to matte transition; and identifying from the plurality of multimodal metallocene-catalyzed polyethylene samples individual multimodal metallocene-catalyzed polyethylene resins having a reduced tendency to melt fracture characterized by a magnitude of slip-stick greater than about 300 psi, a stress for smooth to matte transition greater than about 90 kPa, and a shear rate for smooth to matte transition greater than about 10 s⁻¹.

Classifications:**International (IPC 8-9):** B29C47/00 C08F110/02 C08L23/06 F16L9/00

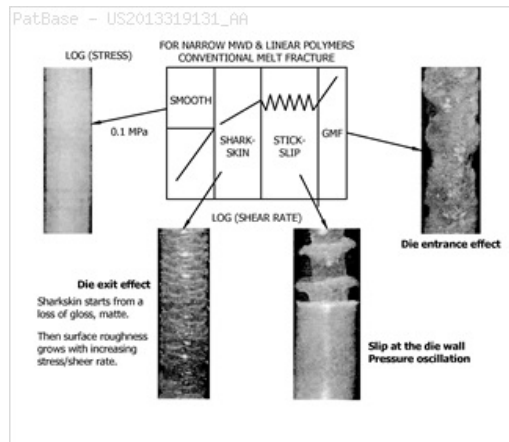
G01L5/00 G01N11/04 G01N3/24 G01N33/44 G06F17/10

G06F19/00 (Advanced/Invention);

F16L9/12 (Advanced/Non-invention)

CPC: G06F17/10 G06F19/703 G01N11/04 C08L23/04 F16L9/00 F16L9/12

C08F110/02 G01N3/24 Y10T428/139 C08L23/06

US: 264/40.1 428/36.9 702/27 702/43 702/45 73/841**Family:**

Publication number	Publication date	Application number	Application date
BR112014029866 A2	20170627	BR20141129866	20130529
CA2874630 AA	20141120	CA20132874630	20130529
CN104508453 A	20150408	CN201380028242	20130529
EP2856105 A2	20150408	EP20130728893	20130529
IN10132DN2014 A	20150821	IN2014DN10132	20141128
KR20150024322 A	20150306	KR20147033497	20130529
MX2014014496 A1	20150604	MX20140014496	20130529
SG11201407968R A1	20141230	SG20141107968	20130529
US2013319131 AA	20131205	US20120660747	20121025
US2013323450 AA	20131205	US20120660777	20121025
US2013325363 AA	20131205	US20120660750	20121025
US8771816 BB	20140708	US20120660777	20121025
WO13181274 A2	20131205	WO2013US43154	20130529
WO13181274 A3	20140515	WO2013US43154	20130529

Priority:

US20120654018P 20120531 US20120660747 20121025 US20120660777 20121025
US20120660750 20121025 WO2013US43154 20130529

Probable Assignee: CHEVRON PHILLIPS CHEMICAL CO LP**Assignee(s):** (std): CHEVRON PHILLIPS CHEMICAL CO ; CHEVRON PHILLIPS CHEMICAL CO LP**Assignee(s):** CHEVRON PHILLIPS CHEMICAL CO LP10001 SIX PINES DRIVETHE WOODLANDSTX77380US ; DESLAURIERS PAUL J ; YANG QING ; MAEGER PAMELA L ; SUKHADIA ASHISH M ; ROHLFING DAVID C ; INN YONGWOO**Inventor(s):** (std): ASHISH M SUKHADIA ; DAVID C ROHLFING ; DESLAURIERS PAUL J ; INN YONGWOO ; MAEGER PAMELA L ; PAUL J DESLAURIERS ; QING YANG ; MEAGER PAMELA L ; PAMELA L MAEGER ; ROHLFING DAVID C ; SUKHADIA ASHISH M ; Y YIN ; YANG QING ; YANG QING ; YONGWOO INN**Inventor(s):** YANG QINGUS ; SUKHADIA ASHISH MUS ; ROHLFING DAVID CUS ; SUKHADIA ASHISH ; PAMELA L MEAGER ; QING YANG ; ROHLFING DAVID ; MAEGER PAMELA LUS ; INN YONGWOOUS ; MAEGER PAMELA ; DESLAURIERS PAUL JUS ; DESLAURIERS PAUL**Agent(s):** SMART AND BIGGAR; POTTER CLARKSON LLP; CONLEY ROSE PC; RODNEY B; CHERYL L; CARROLL RODNEY B ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN 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 PA 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

Abstract: Polyethylene composition with improved swell ratio and mechanical properties, particularly suited for preparing blow-moulded articles, said composition having the following features: 1) density from 0.945 to less than 0.952 grams per cubic centimetre; 2) ratio MIF/MIP from 15 to 30; 3) Shear-Induced Crystallization Index SIC from 2.5 to 5.5.

International (IPC 8-9): B29B15/00 B29C47/00 B29C47/92 B29C49/00 B29C49/04 C08F10/02 C08F2/00 C08F2/34 C08F2/38 C08F210/00 C08F210/16 C08F225/02 C08F297/08 C08F4/64 C08F4/654 C08J5/00 C08L23/04 C08L23/06 C08L23/08 F16L9/12 F16L9/127 (Advanced/Invention); B01J8/18 B29C49/00 B29L31/00 C08F2/34 (Advanced/Non-invention)

CPC: C08F10/02 C08F2/34 C08F110/02 C08L2314/02 C08L23/08 C08F2500/14 C08G2261/62 C08J2323/08 B29C49/00 B29C47/0004 B29C47/92 B29C49/04 C08F2/001 C08L2205/025 C08L2308/00 F16L9/12 F16L9/127 C08J2323/06 C08J2423/06 C08J2423/08 C08F210/16 C08F4/6557 C08F2500/07 C08F2500/12 C08F210/14 C08F2500/01 C08F2500/04 C08F2500/09 C08J5/00 C08L2205/02 B29C49/0005 B29B15/00 C08L2207/07 B29K2023/06 B29L2031/7154 B29L2031/7172 C08L23/0815 C08L23/06

Publication number	Publication date	Application number	Application date
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Priority:

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US20170408172	20170117				

Probable Assignee: BASELL POLYOLEFINE GMBH

Assignee(s): (std): BASELL POLYOLEFINE GMBH ; BASELL POLYOLEFNE GMBH ; BASSEL POLYLEFINE GMBH ; BAZELL POLIOLEFIN GMBKH

Assignee(s): DOLLE VOLKER ; WIESECKE JENS ; MARCZINKE BERND LOTHAR ; SCHULLER ULF ; MEIER GERHARDUS ; ENDERLE JOHANNES FRIEDRICH ; VITTORIAS IAKOVOS ; GALL BARBARA ; LILGE DIETER ; MARCZINKE BERND L

Inventor(s): (std): BERND LOTHER MARCZINKE ; DOLLE VOLKER DR ; SCHULLER ULF ; WIESECKE JENS ; VOLKER DOLLE ; VIZEKKE ENS ; VITTORIYAS IYAKOVOS ; VITTORIAS IAKOVOS ; ULF SCHUELLER ; SHYULLER ULF ; SCHUELLER ULF ; MEIER GERHARDUS ; MEI GABRIELE ; MARTURANO LORELLA ; MARKTSINKE BERND LOTAR ; MARCZINKE BERND LOTHAR ; MARCZINKE BERND L ; MAJER GERKHARDUS ; LILGE DITER ; LILGE DIETER ; JOHANNES FRIEDRICH ENDERLE ; JENS WIESECKE ; IAKOVOS VITTORIAS ; GERHARDUS MEIER ; GALL BARBARA ; ENDERLE JOKHANNES FRIDRIKH ; ENDERLE JOHANNES FRIEDRICH ; DOLLE VOLKER ; DIETER LILGE ; BERND LOTHAR MARCZINKE ; BARBARA GALL ; BAITA PIETRO

Inventor(s): VITTORIAS IAKOVOES ; DOOLE VOLKER

Agent(s): OSLER HOSKIN AND HARCOURT LLP; SEELERT STEFAN; GAVERINI GAETANO LUIGI ATTILIO; ABU GAZALEH INTELLECTUAL PROPERTY LLC; OHGA SHINJI; GAVERINI GAETANO

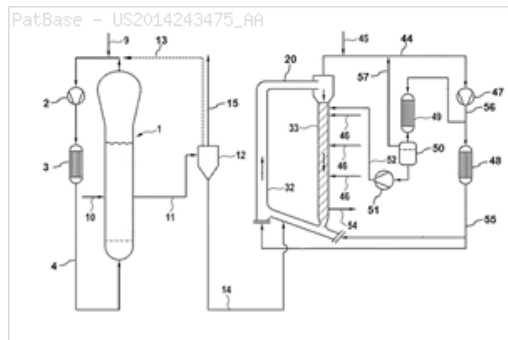
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA 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

Title: **POLYETHYLENE** PROCESSES AND COMPOSITIONS THEREOF

Abstract: Embodiments of the present disclosure relate to a method of preparing **polyethylene** compositions comprising polymerizing ethylene in a first gas-phase reactor and polymerizing ethylene in a second gas-phase reactor in the presence of hydrogen; wherein at least one of the first or second gas-phase reactors comprises a first and second polymerization zone; wherein a hydrogen pressure of the first and second polymerization zones are different such that at least a portion of the second ethylene cycles through the first and second polymerization zones and a gas mixture of each polymerization zone is partially or totally prevented from entering the other zone.

Classifications:

International (IPC 8-9): C08F10/02 C08F2/01 C08F2/34 C08F210/16
C08F4/654 C08F4/76 C08L23/04 C08L23/06
C08L23/08 (Advanced/Invention);
B01J8/18 (Advanced/Non-invention)
CPC: C08L23/06 C08L23/08 Y10S526/905 C08L23/0815 C08F10/02
C08L2314/02 Y02P20/52 C08L2308/00 C08L2205/025
US: 525/240 525/53 526/65 526/905



Family:

Publication number	Publication date	Application number	Application date
BR112015020142 A2	20170718	BR20151120142	20140226
CA2901419 AA	20150814	CA20142901419	20140226
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KR101624093 B1	20160524	KR20157024801	20140226
KR20150119160 A	20151023	KR20157024801	20140226
MX2015010737 A1	20160108	MX20150010737	20140226
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RU2612250 C1	20170303	RU20150139213	20140226
US2014243475 AA	20140828	US20140191090	20140226
US9023945 BB	20150505	US20140191090	20140226
WO14134193 A1	20140904	WO2014US18748	20140226

Priority:

US20130770049P 20130227 US20130820382P 20130507 JP20150559303T 20140226
US20140191090 20140226 WO2014US18748 20140226 JP20160212828 20161031

Probable Assignee: BASELL POLYOLEFINE GMBH

Assignee(s): (std): EQUISTAR CHEM LP ; BASELL POLYOLEFINE GMBH

Assignee(s): DOETSCH DIANA ; EQUISTAR CHEMICALS LP ; MARCZINKE BERND ; MAVRIDIS HARILAOS ; SCHUELLER ULF ; VITTORIAS IAKOVOS ; MEIER GERHARDUS

Inventor(s): (std): BERND MARCZINKE ; DIANA DOETSCH ; DOETSCH DIANA ; GERHARDUS MEIER ; HARILAOS MAVRIDIS ; IAKOVOS VITTORIAS ; MARCZINKE BERND ; MAVRIDIS HARILAOS ; MEIER GERHARDUS ; SCHUELLER ULF ; ULF SCHUELLER ; VITTORIAS IAKOVOS

Agent(s): OSLER HOSKIN AND HARCOURT LLP; SACCO MARCO; ABU GAZALEH INTELLECTUAL PROPERTY LLC; SANDER JASON P ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN 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 IR 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 PA PE PG PH PL PT QA RO RS RU RW SA 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

Title: EXTRUSION PROCESS FOR **POLYETHYLENE** POLYMERS

Abstract: A method for the improved extrusion of **polyethylene** polymers comprising passing **polyethylene** through a single stage, twin screw extruder comprising a solid polymer conveying zone, a polymer melting zone, a dispersive mixing zone, and a distributive mixing/pumping zone, in which the throughput and screw speed are optimized to reduce the number of gels present, ensure complete polymer melting within the polymer melting zone, and to minimize polymer degradation.

Classifications:

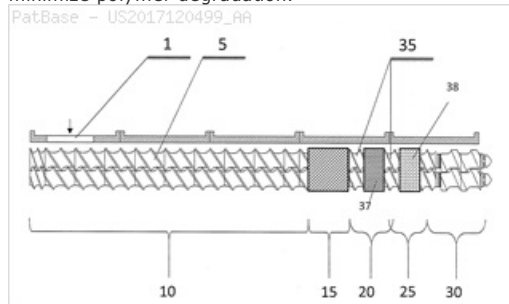
International (IPC 8-9): B29B7/40 B29C47/00 B29C47/40 B29C47/60

B29C47/64 (Advanced/Invention);

B29B7/40 (Advanced/Non-invention)

CPC: B29K2023/06 B29C47/402 B29K2023/065 B29B7/40 B29C47/0004

B29C47/40 B29C47/6087 B29C47/64



Family:

Publication number	Publication date	Application number	Application date
BR112016022569 A2	20170815	BR20161122569	20150202
CA2847628 AA	20150928	CA20142847628	20140328
MX2016012172 A1	20170105	MX20160012172	20150202
US2017120499 AA	20170504	US20150126723	20150202
WO15145271 A1	20151001	WO20151B50786	20150202

Priority:

CA20142847628 20140328 WO20151B50786 20150202

Probable Assignee: NOVA CHEMICALS CORP

Assignee(s): (std): NOVA CHEM INT SA ; NOVA CHEMICALS CORP ; NOVA CHEMICALS INTERNATIONAL S A

Assignee(s): NOVA CHEMICALS INTERNATIONAL SA ; LI TIEQI

Inventor(s): (std): LI TIEQI ; TIEQI LI

Agent(s): BAAR CLIFF

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN 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 IR IS IT JP KE KG KM KN KP KR KZ LA LC 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 PA PE PG PH PL PT QA RO RS RU RW SA 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

Title: ROTOMOLDED ARTICLES

Abstract: This disclosure relates to rotomolded articles, having a wall structure, where the wall structure contains at least one layer containing an ethylene interpolymer product, or a blend containing an ethylene interpolymer product, where the ethylene interpolymer product has: a Dilution Index (Yd) greater than 0; total catalytic metal ≥ 3.0 ppm; ≥ 0.03 terminal vinyl unsaturations per 100 carbon atoms, and; optionally a Dimensionless Modulus (Xd) greater than 0. The ethylene interpolymer products have a melt index from about 0.4 to about 100 dg/minute, a density from about 0.950 to about 0.970 grams per cubic centimetre, a polydispersity (Mw/Mn) from about 2 to about 25 and a CDBI50 from about 55 percent to about 97 percent. Further, the ethylene interpolymer products are a blend of at least two ethylene interpolymers; where one ethylene interpolymer is produced with a single-site catalyst formulation and at least one ethylene interpolymer is produced with a heterogeneous catalyst formulation.

Classifications:

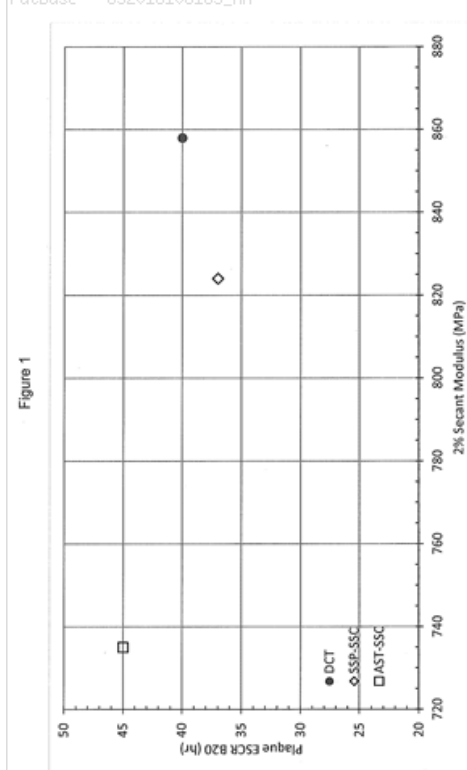
International (IPC 8-9): B29C41/04 B32B27/08 B32B27/32 B32B27/34 B32B3/26 B32B7/12 B65D41/00 C08F10/02 C08F2/00 C08F2/04 C08F2/06 C08F2/38 C08F210/00 C08F210/16 C08F297/08 C08F4/00 C08F4/16 C08F4/642 C08F4/654 C08F4/655 C08F4/658 C08F4/659 C08F4/6592 C08F6/12 C08J5/00 C08J5/18 C08K5/09 C08K5/55 C08L23/04 C08L23/08 C08L23/20 (Advanced/Invention); B29K105/00 B29K23/00 C08F10/02 C08F210/14 (Advanced/Non-invention)

International (IPC 1-7): C08F210/16 C08F4/658 C08L23/08

CPC: C08L2203/16 C08L2205/03 C08J2323/20 C08J2423/20 B32B3/266 B32B27/327 C08J2323/06 B32B2307/7265 B32B2439/40 C08J2323/24 C08J2423/24 C08L2205/025 C08L2314/06 B29C41/04 C08J2323/08 C08J2423/08 B29K2023/08 B29K2105/0058 B29K2105/0085 B29K2105/0094 B29K2905/02 B29K2995/0063 B29K2995/0088 C08F210/16 C08F4/65904 C08F2420/01 C08F4/6585 C08F4/6583 C08F2500/09 C08F2500/12 C08F2500/26 C08F2/06 C08F2/001 C08F2500/18 C08L2205/06 C08J5/00 C08L2314/02 B32B7/12 B32B27/08 B32B27/34 C08F2/04 C08F2/38 C08F6/12 C08K5/09 C08L2205/035 C08F4/6428 C08K5/55 C08J5/18 C08F4/6555 C08F2500/03 C08F2500/11 C08F2500/13 C08F210/14 C08F2500/17 C08L23/08 C08L23/14 B29C41/22 C08L23/0815 C08F4/65908 C08F4/65912 C08F4/6592 C08F2420/04 C08L23/20

US: 428/137 428/36.92 525/240 525/53

PatBase - US2016108185_AA

**Family:**

Publication number	Publication date	Application number	Application date
BR112017008229 A2	20171226	BR20171108229	20151019
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CA2909110 AA	20160421	CA20152909110	20151020
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CA2962113 AA	20170321	CA20152962113	20151019
CA2962281 AA	20170322	CA20152962281	20151019
CN107074995 A	20170818	CN201580056967	20151019
CN107075025 A	20170818	CN201580056957	20151019
CN107075026 A	20170818	CN201580057024	20151009
EP3209720 A2	20170830	EP20150784481	20151009
EP3209721 A1	20170830	EP20150787025	20151019
EP3209722 A2	20170830	EP20150791365	20151019
IN201737013508 A	20170825	IN201737013508	20170417
IN201737013712 A	20170825	IN201737013712	20170418
IN201737013864 A	20170825	IN201737013864	20170419
JP2017531724 T2	20171026	JP20170521501T	20151019
JP2017531725 T2	20171026	JP20170521502T	20151019
JP2017535636 T2	20171130	JP20170521499T	20151009
KR20170071596 A	20170623	KR20177013695	20151019
KR20170073661 A	20170628	KR20177013862	20151019
KR20170073662 A	20170628	KR20177013863	20151009
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MX2017004284 A1	20170626	MX20170004284	20151019
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TW201627378 A	20160801	TW20150134582	20151021
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TW201630943 A	20160901	TW20150134435	20151020
US2016108185 AA	20160421	US20150918964	20151021
US2016108186 AA	20160421	US20150919119	20151021
US2016108196 AA	20160421	US20150919051	20151021
US2016108218 AA	20160421	US20150918890	20151021
US2016108221 AA	20160421	US20150918686	20151021
US2016108222 AA	20160421	US20150918719	20151021
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US2017037228 AA	20170209	US20160298621	20161020
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US2017073482 AA	20170316	US20160341386	20161102
US2017267822 AA	20170921	US20170609051	20170531
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US9512282 BB	20161206	US20150918890	20151021
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US9518159 BB	20161213	US20150919051	20151021
US9695309 BB	20170704	US20160091810	20160406
WO16063164 A2	20160428	WO2015IB57749	20151009
WO16063164 A3	20160707	WO2015IB57749	20151009
WO16063200 A1	20160428	WO2015IB58037	20151019
WO16063205 A2	20160428	WO2015IB58049	20151019
WO16063205 A3	20160707	WO2015IB58049	20151019

Priority:

CA20142868640	20141021	WO2015IB57749	20151009	WO2015IB58049	20151019
WO2015IB58037	20151019	CA20152909093	20151020	CA20152909096	20151020
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Probable Assignee: NOVA CHEMICALS INTERNATIONAL S A

Assignee(s): (std): NOVA CHEMICALS CORP ; NOVA CHEMICAL INT SA ; NOVA CHEM INT SA ; NOVA CHEMICALS ; NOVA CHEMICALS INTERNATIONAL S A

Assignee(s): NOVA CHEMICALS INT SA ; NOVA CHEMICALS INTERNATIONAL SA ; SIBTAIN FAZLE ; TAYLOR KENNETH ; WANG XIAOCHUAN ; WARD DANIEL ; LI TIEQI ; LAM PATRICK ; LI MICHAEL ; CHISHOLM P SCOTT ; DOBBIN CHRISTOPHER ; HARTLEN DONALD GARY ; KHAKDAMAN HAMIDREZA

Inventor(s): (std): BELLEHUMEUR CELINE ; BROWN STEPHEN JOHN ; CHRISTOPHER DOBBIN ; DOBBIN CHRISTOPHER ; DONALD HARTLEN ; FAZLE SIBTAIN ; HAMIDREZA KHAKDAMAN ; HARTLEN DONALD ; KENNETH TAYLOR ; MOLLOY BRIAN ; P SCOTT CHISHOLM ; TAYLOR KENNETH ; TIEQI LI ; WANG XIAOCHUAN ; XIAOCHUAN WANG ; YAMANE MARCELO ; WARD DANIEL ; WANT XIAOCHAUN ; WANG XIAOCHAUN ; TAYLOR KENNETH EDWARD ; SIBTAIN FAZLE ; LI TIEQI ; LI MICHAEL ; LAM PATRICK ; KHAKDAMAN HAMIDREZA ; HARTLEN DONALD GARY ; DOBBIN CHRISTOPHER JOHN BROOKE ; CHISHOLM P SCOTT

Agent(s): CHISHOLM P SCOTT; MCGUINN CALLUM LUKE; ASAMURA PATENT OFFICE PC; LAWRENCE T

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN 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 IR 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 PA PE PG PH PL PT QA RO RS RU RW SA 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

Title: POLYMERS WITH IMPROVED PROCESSABILITY FOR PIPE APPLICATIONS

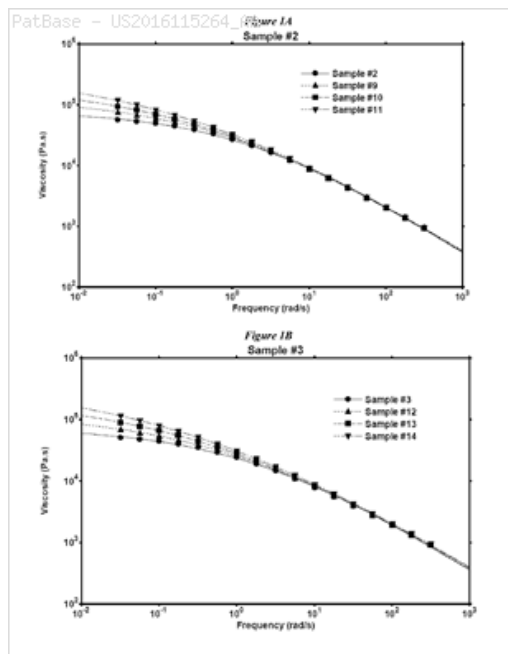
Abstract: A crosslinked metallocene-catalyzed polyethylene copolymer having a higher molecular weight (HMW) component and lower molecular weight (LMW) component wherein the HMW component is present in an amount of from about 10 weight percent to about 30 weight percent and wherein the LMW component is present in an amount of from about 70 weight percent to about 90 weight percent.

Classifications:

International (IPC 8-9): B29D23/00 B32B1/08 C08F10/02 C08F210/02 C08F210/16 C08F4/00 C08F4/65 C08F4/6592 C08J3/24 C08L23/06 C08L23/08 F16L9/12 (Advanced/Invention); C08F4/659 C08F4/6592 (Advanced/Non-invention)

CPC: C08F210/16 C08F4/65912 C08F4/65916 C08F4/65925 C08F4/65927 C08L23/0815 C08L2203/18 C08L2205/025 C08L2312/00 C08F10/02 B29D23/001 C08L23/06 C08F2500/12 C08F2500/13 C08F4/65904 C08F210/14 C08F2500/17

US: 428/36.9 526/348.5



Family:

Publication number	Publication date	Application number	Application date
AU2015335994 AA	20160428	AU20150335994	20151021
CA2965335 AA	20170420	CA20152965335	20151021
CN107075196 A	20170818	CN201580057204	20151021
CO20170003952 A2	20170711	CO20170003952	20170424
EP3209723 A1	20170830	EP20150791422	20151021
JP2017537997 T2	20171221	JP20170522358T	20151021
KR20170074906 A	20170630	KR20177012853	20151021
MX2017005234 A1	20171207	MX20170005234	20151021
SG11201703272R A1	20170530	SG20171103272	20151021
US2016115264 AA	20160428	US20140522991	20141024
US2018044454 AA	20180215	US20170792271	20171024
US9828451 BB	20171128	US20140522991	20141024
WO16064984 A1	20160428	WO2015US56630	20151021

Priority:

US20140522991 20141024 WO2015US56630 20151021 US20170792271 20171024

Probable Assignee: CHEVRON PHILLIPS CHEMICAL CO LP

Assignee(s): (std): CHEVRON PHILLIPS CHEMICAL CO ; CHEVRON PHILLIPS CHEMICAL CO LP

Assignee(s): DESLAURIERS PAUL J ; INN YONGWOO ; SUKHADIA ASHISH M ; YANG QING ; ROHATI VIVEK

Inventor(s): (std): ASHISH M SUKHADIA ; DESLAURIERS PAUL J ; INN YONGWOO ; PAUL J DESLAURIERS ; QING YANG ; ROHATI VIVEK ; ROHATI VIVEK ; SUKHADIA ASHISH M ; VIVEK ROHATI ; YANG QING ; YONGWOO INN

Agent(s): DAVIES COLLISON CAVE PTY LTD ; SMART AND BIGGAR ; CAROLINA MERCEDES DAZA MONTALVO ; POTTER CLARKSON LLP ; ASAMURA PATENT OFFICE PC ; CHAD E ; RODNEY B ; CONLEY ROSE PC ; HUSEMAN CHERYL L

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN 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 IR 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 PA PE PG PH PL PT QA RO RS RU RW SA 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

Title: CONTINUOUS FIBER-POLYOLEFIN COMPOSITES AND METHODS OF MAKING

Abstract: The present invention relates to polyolefin matrix composites reinforced with continuous carbon fibers, and a process for making them. The polymer-fiber composite material comprises a plurality of continuous fibers; and a polyolefin matrix, wherein, the polyolefin matrix comprises polyolefin polymer chains with a number average **molecular weight** of at least 1x106 amu, and wherein, the polymer-fiber composite has a notched impact **strength** greater than the notched impact **strength** of a neat polyolefin, wherein the neat polyolefin has an equivalent chemical composition and number average **molecular weight** as the polyolefin of the polyolefin matrix in the polymer-fiber composite material. The present invention also relates to articles of manufacture made substantially from polyolefin matrix composites reinforced with continuous carbon fibers as well as orthopedic implant devices having a wear surface, or bearing comprising a polyolefin matrix composite reinforced with continuous carbon fibers.

Classifications:

International (IPC 8-9): B29C43/00 B29C70/42 B29K21/00 C08K7/06 (Advanced/Invention);

B29K105/08 B29K21/00 B29K23/00 B29K307/04

B29L31/00 (Advanced/Non-invention)

CPC: B29K2023/00 B29K2105/08 B29K2307/04 B29L2031/7532

B29C70/42 C08J5/042 C08J2323/06 B29C43/003

PatBase - US9518171_BA

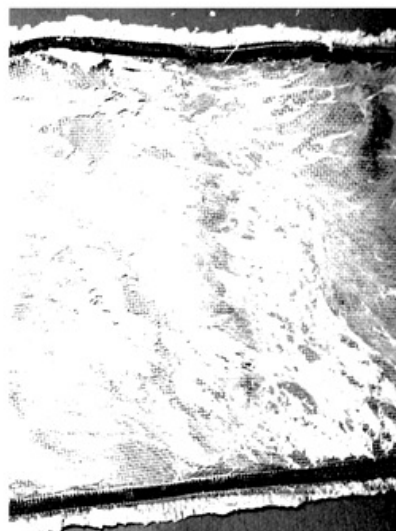


Fig. 1

Family:

Publication number	Publication date	Application number	Application date
US9518171 BA	20161213	US20150852020	20150911
US9808967 BA	20171107	US20160270282	20160920

Priority:

US20150852020 20150911 US20160270282 20160920

Probable Assignee: TDA RESEARCH INC

Assignee(s): (std): TDA RESEARCH INC

Assignee(s): NATIONAL INSTITUTES OF HEALTH NIH US DEPT OF HEALTH AND HUMAN SERVICES DHHS US GOVERNMENT

Inventor(s): (std): DIENER MICHAEL D

Agent(s): BRIAN J

Title: MULTIMODAL **POLYETHYLENE** FILM

Abstract: The present invention relates to a multimodal **polyethylene** composition comprising: (A) 40 to 65 parts by weight, preferably 43 to 52 parts by weight, most preferred 44 to 50 parts by weight, of the low **molecular weight polyethylene** having a weight average **molecular weight** (Mw) of 20,000 to 90,000 g/mol, wherein the low **molecular weight polyethylene** has a M12 of 500 to 1,000 g/10 min according to ASTM D 1238; (B) 5 to 17 parts by weight, preferably 10 to 17 parts by weight, most preferred 10 to 15 parts by weight, of the first high **molecular weight polyethylene** having a weight average **molecular weight** (Mw) of more than 150,000 to 1,000,000g/mol or the first ultra high **molecular weight polyethylene** having a weight average **molecular weight** (Mw) of more than 1,000,000 to 5,000,000g/mol; and (C) 30 to 50 parts by weight, preferably 37 to 47 parts by weight, most preferred 39 to 45 parts by weight, of the second high **molecular weight polyethylene** having a weight average **molecular weight** (Mw) of more than 150,000 to 1,000,000g/mol or the second ultra high **molecular weight polyethylene** having a weight average **molecular weight** (Mw) of more than 1,000,000 to 5,000,000g/mol, wherein the density of the first high **molecular weight polyethylene** or the first ultra high **molecular weight polyethylene** and the second high **molecular weight polyethylene** or the second ultra high **molecular weight polyethylene** is in the same range and both densities are in the range from 0.910 to 0.940 grams per cubic centimetre; and the **molecular weight** distribution of the multimodal **polyethylene** composition is from 18 to 30, preferably 20 to 28, measured by gel permeation chromatography., film comprising the multimodal polyethylene composition and the use thereof.

Classifications:

International (IPC 8-9): B01J19/00 C08F2/00 C08F2/01 C08F2/12 C08F2/18 C08J5/18 C08L23/04 C08L23/06 (Advanced/Invention)

CPC: C08L23/06 C08J5/18 C08L23/04 C08J2323/06

Family:

Publication number	Publication date	Application number	Application date
EP3293210 A1	20180314	EP20160188335	20160912
WO18046663 A1	20180315	WO2017EP72586	20170908
WO18046664 A1	20180315	WO2017EP72587	20170908

Priority:

EP20160188335 20160912

Probable Assignee: SCG CHEMICALS CO LTD

Assignee(s): (std): SCG CHEMICALS CO LTD ; THAI POLYETHYLENE CO LTD

Assignee(s): THAI POLYETHYLENE CO ; SCG CHEMICALS CO

Inventor(s): (std): ARUNSRI MATTAYAN ; CHEEVASRIRUNGRUANG WATCHAREE ; KLOMKAMOL WARACHAD ; MATTAYAN ARUNSRI ; SARANYA TRASILANUN ; TRASILANUN SARANYA ; WARACHAD KLOMKAMOL ; WATCHAREE CHEEVASRIRUNGRUANG

Agent(s): SCHOLZ VOLKER; BOEHMERT AND BOEHMERT; ERBACHER MARTIN ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ 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 IR IS IT JO JP KE KG KH KM KN KP KR KW 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 PA PE PG PH PL PT QA RO RS RU RW SA 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

Title: MULTIMODAL **POLYETHYLENE** COMPOSITION AND A FILM COMPRISING THE SAME

Abstract: The present invention relates to a multimodal **polyethylene** composition comprising: (A) 40 to 65 parts by weight, preferably 43 to 52 parts by weight, most preferred 44 to 50 parts by weight, of the low **molecular weight polyethylene**, the low **molecular weight polyethylene** having a weight average **molecular weight** (Mw) of 20,000 to 90,000 g/mol and having a MFRa from 500 to 1,000 g/10 min according to ASTM D 1238; (B) 8 to 20 parts by weight, preferably 10 to 18 parts by weight, most preferred 10 to 15 parts by weight, of the first high **molecular weight polyethylene** having a weight average **molecular weight** (Mw) of more than 150,000 to 1,000,000g/mol or the first ultra high **molecular weight polyethylene** having a weight average **molecular weight** (Mw) of more than 1,000,000 to 5,000,000g/mol; and (C) 30 to 50 parts by weight, preferably 37 to 47 parts by weight, most preferred 39 to 45 parts by weight, of the second high **molecular weight polyethylene** having a weight average **molecular weight** (Mw) of more than 150,000 to 1,000,000g/mol or the second ultra high **molecular weight polyethylene** having a weight average **molecular weight** (Mw) of more than 1,000,000 to 5,000,000g/mol, wherein the density of the first high **molecular weight polyethylene** or the first ultra high **molecular weight polyethylene** and the second high **molecular weight polyethylene** or the second ultra high **molecular weight polyethylene** are in the range from 0.920 to 0.950 grams per cubic centimetre, and wherein the **molecular weight** distribution of the multimodal **polyethylene** composition is from 20 to 28, preferably from 24 to 28, measured by gel permeation chromatography, and a film comprising the multimodal polyethylene composition and the use thereof.

Classifications:

International (IPC 8-9): B01J19/00 C08F2/00 C08F2/01 C08F2/12 C08F2/18 C08J5/18 C08L23/04 C08L23/06 (Advanced/Invention)

CPC: C08F2/00 B01J19/00 C08F2/01 C08F2/12 C08F2/18 C08J5/18 C08L23/04 C08L23/06

Family:

Publication number	Publication date	Application number	Application date
EP3293209 A1	20180314	EP20160188329	20160912
WO18046652 A1	20180315	WO2017EP72567	20170908
WO18046656 A1	20180315	WO2017EP72571	20170908

Priority:

EP20160188329 20160912

Probable Assignee: SCG CHEMICALS CO LTD

Assignee(s): (std): SCG CHEMICALS CO LTD ; THAI POLYETHYLENE CO LTD

Assignee(s): THAI POLYETHYLENE CO ; SCG CHEMICALS CO

Inventor(s): (std): ARUNSRI MATTAYAN ; CHEEVASRIRUNGRUANG WATCHAREE ; KLOMKAMOL WARACHAD ; MATTAYAN ARUNSRI ; SARANYA TRASILANUM ; TRASILANUN SARANYA ; WARACHAD KLOMKAMOL ; WATCHAREE CHEEVASRIRUNGRUANG

Agent(s): SCHOLZ VOLKER; ERBACHER MARTIN ET AL; ERBACHER MARTIN

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ 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 IR IS IT JO JP KE KG KH KM KN KP KR KW 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 PA PE PG PH PL PT QA RO RS RU RW SA 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