



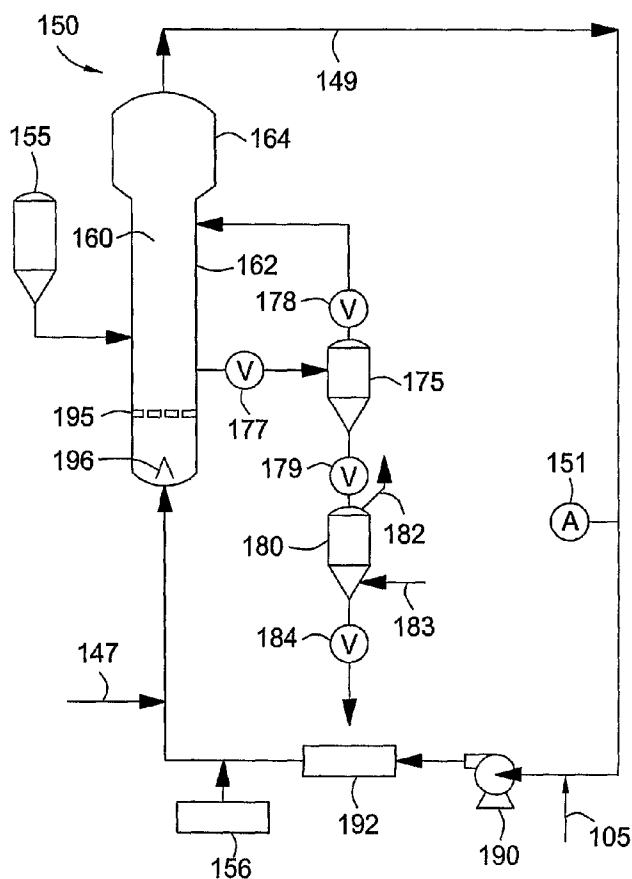
(43) International Publication Date
8 February 2007 (08.02.2007)

(10) International Publication Number
WO 2007/015927 A1

- | | |
|--|--|
| <p>(51) International Patent Classification:
 <i>C08F 10/02</i> (2006.01) <i>C08F 4/69</i> (2006.01)
 <i>C08F 2/34</i> (2006.01) <i>C08F 210/02</i> (2006.01)
 <i>C08F 4/24</i> (2006.01)</p> | <p>(72) Inventors; and
 (75) Inventors/Applicants (for US only): CANN, Kevin, J. [US/US]; 31 Montgormery Avenue, Rocky Hill, NJ 05883 (US). EISINGER, Ronald, S. [US/US]; 1503 Rockford Court, Charleston, WV 25314 (US). GOODE, Mark, G. [US/US]; 17 Meadowbrook Circle, Hurricane, WV 25526-8906 (US). MOORHOUSE, John, H. [US/US]; 17 Constable Road, Kendall Park, NJ 08824-1151 (US). MURE, Cliff, R. [US/US]; 80 Perrine Pike, Hillsborough, NJ 08844 (US). JAKER, Stephen, P. [US/US]; 582 Alden Street, Woodbridge, NJ 07095 (US). APECETCHE, Maria, A. [US/US]; 404 Wicklow Way, Bridgewater, NJ 08807 (US).</p> |
| <p>(21) International Application Number:
 PCT/US2006/028160</p> | |
| <p>(22) International Filing Date: 21 July 2006 (21.07.2006)</p> | |
| <p>(25) Filing Language: English</p> | |
| <p>(26) Publication Language: English</p> | |
| <p>(30) Priority Data:
 11/190,481 27 July 2005 (27.07.2005) US</p> | |
| <p>(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:
 US 11/190,481 (CIP)
 Filed on 27 July 2005 (27.07.2005)</p> | <p>(74) Agents: ARECHEDERRA, Leandro et al.; UNIVATION TECHNOLOGIES, LLC, 5555 San Felipe, Suite 1950, Houston, TX 77056 (US).</p> |
| <p>(71) Applicant (for all designated States except US): UNIVATION TECHNOLOGIES, LLC [US/US]; 5555 San Felipe, Suite 1950, Houston, TX 77056 (US).</p> | <p>(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP,</p> |

[Continued on next page]

- (54) Title:** BLOW MOLDING POLYETHYLENE RESINS



(57) Abstract: Disclosed herein are various processes, including continuous fluidized-bed gas- phase polymerization processes for making a high strength, high density polyethylene copolymer, comprising (including): contacting monomers that include ethylene and optionally at least one non-ethylene monomer with fluidized catalyst particles in a gas phase in the presence of hydrogen gas at an ethylene partial pressure of 100 psi or more and a polymerization temperature of 120°C or less to produce a polyethylene copolymer having a density of 0.945 g/cc or more and an ESCR Index of 1.0 or more wherein the catalyst particles are prepared at an activation temperature of 700°C or less, and include silica, chromium, and titanium.



KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US (patent), UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

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

Published:

- *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.