

(51) International Patent Classification:
C08L 25/04 (2006.01)(21) International Application Number:
PCT/US2013/021812(22) International Filing Date:
17 January 2013 (17.01.2013)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/587,681 18 January 2012 (18.01.2012) US
13/740,322 14 January 2013 (14.01.2013) US
13/740,320 14 January 2013 (14.01.2013) US(71) Applicant: **EASTMAN CHEMICAL COMPANY**
[US/US]; 200 South Wilcox Drive, Kingsport, TN 37660 (US).(72) Inventors: **CHENG, Wei, Min**; 1170 Galaxy Circle, Pittsburgh, PA 15241 (US). **RAJESH RAJA, Puthenkovilakom**; 3601 John B. Dennis Hwy, #902, Kingsport, TN 37660 (US). **KUTSEK, George, Joseph**; 1406 Bristol Drive, South Park, PA 15129 (US). **PENN, John, B.**; 332 Dutch Lane, Pleasant Hills, PA 15236 (US).(74) Agent: **OWEN, Polly, C.**; P.O. Box 511, Kingsport, Tennessee 37662-5075 (US).

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

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(88) Date of publication of the international search report:
5 February 2015

(54) Title: LOW MOLECULAR WEIGHT POLYSTYRENE RESIN AND METHODS OF MAKING AND USING THE SAME

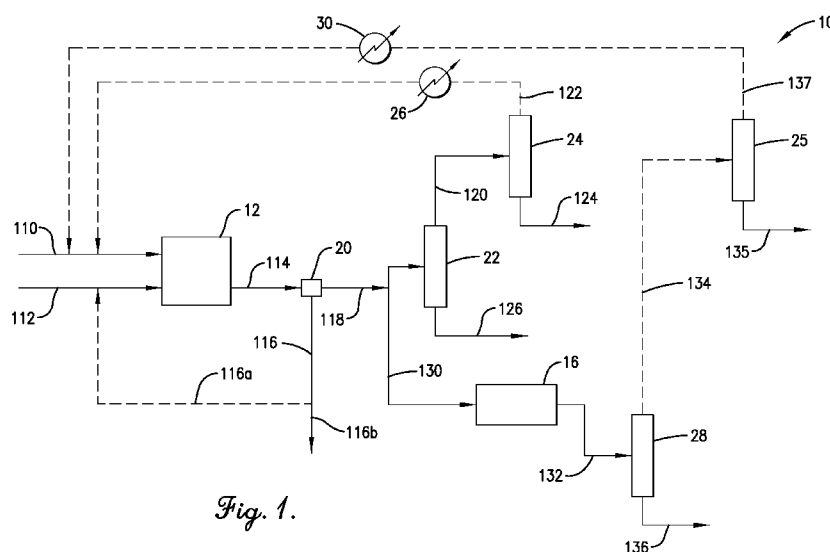


Fig. 1.

(57) Abstract: A low z-average molecular weight, high softening point polystyrene resin having a narrow molecular weight distribution, as well as methods of making and using the same, are provided. The use of an inert solvent and/or the order of addition of reactants during polymerization may contribute to the unique properties of the final homopolymeric resin. The polystyrene resin can be partially or fully hydrogenated and may have particular use as a tackifying agent in a variety of hot melt adhesive and rubber compositions.