

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
25 January 2024 (25.01.2024)



(10) International Publication Number
WO 2024/017743 A1

(51) International Patent Classification:
C10L 1/16 (2006.01) *C10L 10/10* (2006.01)

(21) International Application Number:
PCT/EP2023/069412

(22) International Filing Date:
13 July 2023 (13.07.2023)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/390,715 20 July 2022 (20.07.2022) US
22188199.8 02 August 2022 (02.08.2022) EP

(71) Applicant (for all designated States except US): **SHELL INTERNATIONAL RESEARCH MAATSCHAPPIJ B.V.** [NL/NL]; Carel van Bylandtlaan 30, 2596 HR The Hague (NL).

(71) Applicant (for US only): **SHELL USA, INC.** [US/US]; P.O. BOX 576, Houston, Texas 77001-0576 (US).

(72) Inventors: **JOHNSON, Kimberly Ann**; 3000 Post Oak Blvd, Houston, Texas 77056 (US). **BERA, Tushar Kanti**; 3333 Highway 6 South, Houston, Texas 77082-3101 (US). **ARADI, Allen Ambwere**; 3333 Highway 6 South, Houston, Texas 77082-3101 (US).

(74) Agent: **SHELL LEGAL SERVICES IP**; PO BOX 384, 2501 CJ The Hague (NL).

(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, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ,

Published:

- with international search report (Art. 21(3))
- in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE

(54) Title: FUEL COMPOSITIONS

(57) Abstract: Fuel composition comprising: (a) a gasoline base fuel suitable for use in a spark ignition internal combustion engine; and (b) a polybutene polymer; wherein the polybutene polymer has a molecular weight in the range from 200 to 10,000 g/mol, wherein greater than 30% of the polymer molecules in the polybutene polymer have a terminal vinylidene group and wherein the polybutene polymer is present at a level from 500ppm to 5000ppm, by weight of the fuel composition. The fuel compositions of the present invention provide improved engine power and reduced burn duration.

WO 2024/017743 A1