

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
25 November 2021 (25.11.2021)



(10) International Publication Number
WO 2021/237030 A1

(51) International Patent Classification:

C10G 17/00 (2006.01) C10G 27/00 (2006.01)
C10G 25/00 (2006.01) C10L 1/04 (2006.01)

(21) International Application Number:

PCT/US2021/033561

(22) International Filing Date:

21 May 2021 (21.05.2021)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/028,709 22 May 2020 (22.05.2020) US
17/325,929 20 May 2021 (20.05.2021) US

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(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, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,

(54) Title: HIGH NAPHTHENIC CONTENT KEROSENE COMPOSITIONS

Property	Units	Kero 1	Kero 2	Kero 3	Kero 4	Kero 5	Kero 6	Kero 7	Kero 8	Kero 9
Density at 15.6°C	g/ml	0.8234	0.8151	0.8059	0.8154	0.8149	0.811	0.81	0.7962	0.8139
API Gravity	-	40.6	41.9	44.3	41.8	44.1	42.8	39.2	46.2	42.4
Cloud Point	°C	-40	-38	-38	-36	-34	-35	-37	-45	-46
Freeze Point	°C	-34.5	-35.9	-34.5	-32.3	-32.8	-32.2	-32.5	-44.6	-43.1
Sulfur Content	mass%	0.02	0.008	0.005	0.0053	0.0047	0.0086	0.011	0.005	0.0093
Nitrogen Content	mg/kg	5.9	<5	<5	<5	<5	3.9	4.1	1.6	1.3
GC Distillation										
Temperature, 10% off	°C	196	194	193	196	196	201	197	175	184
Temperature, 50% off	°C	239	236	236	242	239	243	246	206	215
Temperature, 90% off	°C	284	282	281	287	286	289	287	250	251
Composition										
Paraffins	wt%	38.3	41.4	34.1	43.9	51.9	41.0	32.1	53.3	43.7
Total Naphthenes	wt%	47.4	50.2	39.4	47.3	43.2	43.4	42.3	35.6	36.6
Total Aromatics	wt%	14.3	8.3	6.5	8.8	5.9	15.6	25.6	11.1	19.6

FIG. 3

(57) Abstract: Kerosene boiling range or jet fuel boiling range compositions are provided that are formed from crude oils with, unexpected combinations of high naphthenes to aromatics weight and/or volume ratio and a low sulfur content. The resulting kerosene boiling range fractions can have an unexpected combination of a high naphthenes to aromatics weight ratio, a low but substantial aromatics content, and a low sulfur content. Such fractions can potentially be used as fuel after a reduced or minimized amount of additional refinery processing. By reducing, minimizing, or avoiding the amount of refinery processing needed to meet fuel and/or fuel blending product specifications, the fractions derived, from the high naphthenes to aromatics ratio and low sulfur crudes can provide fuels and/or fuel blending products having a reduced or minimized carbon intensity.

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HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, 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, 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, GH, GM, KE, LR, LS, MW, MZ, NA, RW, 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, 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, KM, ML, MR, NE, SN, TD, TG).

Published:

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*