CLAIMS

1. An aviation fuel component, comprising n-paraffins, monobranched i-paraffins and multiple-branched i-paraffins, wherein

the sum amount of C6-C18 n-paraffins, C6-C18 monobranched i-paraffins, and C6-C18 multiple-branched i-paraffins is at least 90 wt-%, preferably at least 93 wt-%, more preferably at least 95 wt-%, even more preferably at least 96 wt-% of the total aviation fuel component weight, and wherein

the weight ratio of C6-C18 multiple-branched i-paraffins to C6-C18 n-paraffins is at least 11, and wherein

the aviation fuel component has T10 and T90 temperatures, as determined according to EN ISO 3405-2019, within a range from 120 °C to 295 °C, preferably within a range from 130 °C to 295 °C.

2. The aviation fuel component according to claim 1, wherein the sum amount of C6-C18 monobranched i-paraffins, and C6-C18 multiple-branched i-paraffins is at least 85 wt-%, preferably at least 87 wt-%, more preferably at least 90 wt-%, even more preferably at least 92 wt-% of the total aviation fuel component weight; and/or the amount of C6-C18 multiple-branched i-paraffins is at least 58 wt-%, preferably at least 60 wt-%, more preferably at least 62 wt-% of the total aviation fuel component weight.

3. The aviation fuel component according to claim 1 or 2, wherein the weight ratio of C6-C18 multiple-branched i-paraffins to C6-C18 n-paraffins is at least 12, more preferably at least 14, even more preferably at least 16; and/or the weight ratio of C6-C18 multiple-branched i-paraffins to C6-C18 mono-branched i-paraffins is at least 1.6, preferably at least 1.7, more preferably at least 1.8, even more preferably at least 1.9.

4. The aviation fuel component according to any one of the preceding claims, wherein the weight ratio of C14-C18 multiple-branched i-paraffins to C14-C18 n-paraffins is more than 20, preferably at least 30, more preferably at least 40, even more preferably at least 50; and/or the weight ratio of C14-C18 multiple-branched i-paraffins to C14-C18 mono-branched i-paraffins is more than 2.0, preferably at least 2.4, more preferably at least 2.6, even more preferably at least 2.8; and/or the weight-ratio of C14-C18 multiple-branched i-paraffins with at least three branches to C14-C18 total i-paraffins is at least 0.10, preferably at least 0.12, more preferably at least 0.15, even more preferably at least 0.17; and/or the amount of C14-C18 multiple-branched i-paraffins is at least 35 wt-%, preferably at least 40 wt-%, more preferably at least 45 wt-%, even more preferably at least 50 wt-% of the total aviation fuel component weight; and/or the amount of C14-C18 multiple-branched i-

paraffins with at least three branches is at least 5 wt-%, preferably at least 8 wt-%, more preferably at least 10 wt-%, even more preferably at least 12 wt-% of the total aviation fuel component weight.

5. The aviation fuel component according to any one of the preceding claims, wherein the amount of C6-C13 multiple-branched i-paraffins is at least 5.0 wt-%, preferably at least 7.0 wt-%, more preferably at least 8.0 wt-%, even more preferably at least 9.0 wt-% of the total aviation fuel component weight.

6. The aviation fuel component according to any one of the preceding claims, wherein the weight ratio of C14-C18 total paraffins to C6-C13 total paraffins is within a range from 0.8 to 5.0, preferably from 1.0 to 4.5, more preferably from 1.1 to 4.0, even more preferably from 1.2 to 3.5.

7. The aviation fuel component according to any one of the preceding claims, wherein the carbon number distribution of the paraffins in the present aviation fuel component covers at least six adjacent carbon numbers, preferably at least seven adjacent carbon numbers, more preferably at least eight or at least nine adjacent carbon numbers, within the C6-C18 range.

8. The aviation fuel component according to any one of the preceding claims, wherein the difference between T90 and T10 temperatures, as determined according to EN ISO 3405-2019, is at least 70 °C, preferably at least 75 °C, more preferably at least 80 °C, even more preferably at least 85 °C.

9. The aviation fuel component according to any one of the preceding claims, having a T90 temperature of at least 250 °C, preferably at least 255 °C, optionally at most 295 °C, more preferably within a range from 250 °C to 295 °C, as determined according to EN ISO 3405-2019, and optionally having a final boiling point (FBP) at most 300 °C, preferably at least 270 °C, more preferably within a range from 270 °C to 300 °C, as determined according to EN ISO 3405-2019.

10. The aviation fuel component according to any one of the preceding claims, wherein the ratio of difference between T50 and T5 temperatures to difference between T95 and T50 temperatures (T50-T5)/(T95-T50) is within a range from 0.7 to 6.0, preferably from 0.8 to 5.5.

11. The aviation fuel component according to any one of the preceding claims, having a kinematic viscosity at -20 °C as determined according to EN ISO 3104-2020 within a range

from 4.0 mm^2/s to 10.0 mm^2/s, preferably from 4.0 mm^2/s to 9.5 mm^2/s, more preferably from 4.0 mm^2/s to 8.5 mm^2/s; and/or having a kinematic viscosity at -40 °C as determined according to EN ISO 3104-2020, within a range from 9.0 mm^2/s to 30.0 mm^2/s, preferably from 10.0 mm^2/s to 28.0 mm^2/s, more preferably from 10.0 mm^2/s to 25.0 mm^2/s.

12. The aviation fuel component according to any one of the preceding claims, having a flash point as determined according to IP 170-2013 (Abel closed-cup method) of at least 38°C.

13. The aviation fuel component according to any one of the preceding claims, having a freezing point as determined according to IP 529-2016 of -40 °C or less, preferably -50 °C or less, more preferably -60 °C or less.

14. The aviation fuel component according to any one of the preceding claims, having density at 15 °C as determined according to EN ISO 12185-1996 within a range from 750 kg/m^3 to 780 kg/m^3, preferably from 750 kg/m^3 to 775 kg/m^3, more preferably from 750 kg/m^3 to 772 kg/m^3.

15. The aviation fuel component according to any one of the preceding claims, having a biogenic carbon content, as determined according to EN 16640 (2017), of at least 50 wt-%, preferably at least 70 wt-%, more preferably at least 90 wt-% based on the total weight of carbon (TC) in the aviation fuel component.

16. The aviation fuel component according to any one of the preceding claims, obtainable by a process comprising

providing a paraffinic hydrocarbon feed, preferably obtained by hydrodeoxygenation of an oxygenated hydrocarbon feed typically comprising vegetable oils, animal fats, and/or microbial oils and optionally followed by gas-liquid separation and/or paraffinic feed fractionation(s), and

subjecting the paraffinic hydrocarbon feed to at least hydroisomerisation, preferably to hydroisomerisation and hydrocracking, followed by fractionation, and recovering from the fractionation at least the aviation fuel component.

17. The aviation fuel component according to any one of the preceding claims, obtainable by a process comprising

providing a paraffinic hydrocarbon feed comprising at least 60 wt-% paraffins of the total weight of the paraffinic hydrocarbon feed, of which paraffins at most 30 wt-% are i-paraffins;

subjecting the paraffinic hydrocarbon feed in a first reaction section, preferably in a first reactor, to hydroisomerisation in the presence of a hydroisomerisation catalyst to obtain a hydroisomerisation effluent;

subjecting a second reaction section feed comprising at least a portion of the hydroisomerisation effluent to hydrocracking in a second reaction section, preferably in a second reactor, in the presence of a hydrocracking catalyst to obtain a hydrocracking effluent;

subjecting the hydrocracking effluent, and optionally a portion of the hydroisomerisation effluent, to fractionation, and recovering from the fractionation at least the aviation fuel component, and optionally a gasoline fuel component and/or a diesel fuel component.

18. An aviation fuel composition comprising the aviation fuel component according to any one of claims 1-16.

19. Use of an aviation fuel component according to any one of claims 1 to 16 in an aviation fuel composition for improving one or more product properties of the aviation fuel composition, wherein said one or more product properties of the aviation fuel composition preferably comprise at least one or more of kinematic viscosity at -20 °C, kinematic viscosity at -40 °C, freezing point, density, and/or biogenic carbon content.

20. Use according to claim 18 or 19 or the aviation fuel composition according to claim 17, wherein the aviation fuel composition fulfills the requirements for aviation fuels set in ASTM D7566-21 Table 1.

21. Use according to any one of claims 18 to 20 or the aviation fuel composition according to claim 17 or 20, wherein said aviation fuel composition comprises the aviation fuel component according to any one of claims 1 to 16 in an amount from 1 to 99.5 vol-%, preferably from 5 to 95 vol-%, more preferably from 10 to 70 vol-% of the total aviation fuel composition volume.

22. Use of an aviation fuel component according to any one of claims 1 to 16 in solvent(s), in carrier(s), in dispersant composition(s), in demulsifier(s), in extractant(s), in detergent(s), in degreasing composition(s), in cleaner(s), in thinner(s), in penetrating oil(s), in anticorrosion composition(s), in multipurpose oil(s), in metal working fluid(s), in rolling oil(s) especially for aluminium, in cutting oil(s), in drilling fluid(s), in lubricant(s), in extender oil(s), in paint composition(s), in coating fluid(s) or paste(s), in adhesive(s), in resin(s), in varnish(es), in printing paste(s) or ink(s), in plasticizing oil(s), in turbine oil(s), in

hydrophobization composition(s), in agriculture, in crop protection fluid(s), in construction, in concrete demoulding formulation(s), in electronics, in medical appliance(s), in feedstock(s) for industrial conversion process(es), preferably in thermal cracking feedstock(s) and/or in catalytic cracking feedstock(s), in composition(s) for car, electrical, textile, packaging, paper and/or pharmaceutical industry, and/or in manufacture of intermediate(s) therefor.

23. Use according to any of one of claims 18 to 22, or the aviation fuel composition according to any one of claims 17, 20, or 21, or the aviation fuel component according to any one of claims 1 to 16, wherein the aviation fuel component or the aviation fuel composition is additized with at least one or more of antioxidant(s), electrical conductivity additive(s), stabilizer(s), detergent(s), corrosion inhibitor(s), friction modifier(s), metal deactivator(s), lubricating additive(s), antifoaming agent(s), and/or fuel dye(s).