

CLAIMS

1. Fluid having a boiling point in the range of from 100 to 400°C and comprising more than 95% isoparaffins and containing less than 100ppm aromatics by weight,
5 obtainable by the process comprising the step of catalytically hydrogenating a feed comprising more than 95% by weight of a hydrodeoxygenated isomerized hydrocarbon biomass feedstock, at a temperature from 80 to 180°C, at a pressure from 50 to 160 bars, a liquid hourly space velocity of 0.2 to 5 hr⁻¹ and an hydrogen treat rate up to 200 Nm³/ton of feed,
10 said fluid having a ratio of iso-paraffins to n-paraffins of at least 12:1.
2. Fluid of claim 1, obtainable by the process wherein the hydrogenation conditions are the following:
 - Pressure: 80 to 150 bars, and preferably 90 to 120 bars;
 - 15 - Temperature: 120 to 160°C and preferably 150 to 160°C;
 - Liquid hourly space velocity (LHSV) : 0.4 to 3, and preferably 0.5 to 0.8;
 - Hydrogen treat rate be up to 200 Nm³/ton of feed.
3. Fluid of claim 1 or 2, wherein the feed comprises more than 98%, preferably more than 99% of a hydrodeoxygenated isomerized hydrocarbon biomass feedstock, and more preferably consists of a hydrodeoxygenated isomerized hydrocarbon biomass feedstock.
20
4. Fluid of any one of claims 1 to 3, wherein the biomass is a vegetable oil, an ester thereof or a triglyceride thereof.
25
5. Fluid of any one of claims 1 to 4, wherein (i) a fractionating step is carried out before the hydrogenating step, or after the hydrogenating step or both, or (ii) the process comprises three hydrogenation stages, preferably in three separate reactors, or (iii) both (i) and (ii).
30
6. Fluid of any one of claims 1 to 5, having a boiling point in the range of from 100 to 400°C and a boiling range below 80°C, said fluid comprising more than 95% isoparaffins and less than 3% of naphthens by weight and having a ratio of iso-paraffins to n-paraffins of at least 12:1, a biodegradability at 28 days of at least 60%,
35 as measured according to the OECD 306 standard, a biocarbon content of at least 95% by weight, and containing less than 100ppm aromatics by weight.

7. Fluid of any one of claims 1 to 6, having a boiling point in the range 150 to 400°C, preferably from 200 to 400°C, especially 220 to 340°C and advantageously more than 250°C and up to 340°C.

8. Fluid of any one of claims 1 to 7, having a boiling range below 80 °C, preferably below 60°C, advantageously between 40 and 50°C.

9. Fluid of any one of claims 1 to 8, containing less than 50ppm aromatics by weight, and preferably less than 20ppm by weight.

10. Fluid of any one of claims 1 to 9, containing less than 3% by weight of naphthens, preferably less than 1% and advantageously less than 50ppm by weight.

11. Fluid of any one of claims 1 to 10, comprising more than 98% isoparaffins by weight.

12. Fluid of any one of claims 1 to 11, having a ratio of iso-paraffins to n-paraffins of at least 15:1, more preferably at least 20:1.

13. Fluid of any one of claims 1 to 12, having a biodegradability at 28 days of at least 60%, preferably at least 70%, more preferably at least 75% and advantageously at least 80%, as measured according to the OECD 306 standard.

14. Fluid of any one of claims 1 to 13, having a biocarbon content of at least 95% by weight, preferably at least 97%, more preferably at least 98%, and even more preferably about 100%.

15. Use of the fluids according to any one of claims 1 to 14, as drilling fluids, in hydraulic fracturing, in mining, in water treatments, as industrial solvents, in paints composition, for decorative coatings, in coating fluids, in car industry, in textile industry, in metal extraction, in explosives, in oil dispersants, in concrete demoulding formulations, in adhesives, in printing inks, in metal working fluids, coating fluids, rolling oils especially for aluminum, as cutting fluids, as rolling oils, as electric discharge machining (EDM) fluids, rust preventive, industrial lubricants, as extender oils, in sealants such as mastics or polymers especially with silicone, as viscosity depressants in plasticised polyvinyl chloride formulations, in resins, in varnishes, as phytosanitary fluid especially as crop protection fluids, as adjuvant or excipient in vaccine preparations, in paint compositions, especially low-odor paints, in polymers used in water treatment, paper manufacturing or printing pastes especially as thickener, cleaning and/or degreasing solvents, for slurry polymerization, in food processing industry, for food grade application, home care,

heat-transfer media, shock absorbers, insulation oils, hydraulic oils, gear oils, turbine oils, textile oils and in transmission fluids such as automatic transmission fluids or manual gear box formulations, and as solvents in chemical reactions including cristallization, extraction and fermentation.