HVO100 Bio

Alternative 100 % biomass based low carbon fuel for diesel engines

Description

HVO100 Bio is an alternative fuel for diesel engines. HVO100 Bio is made from 100% biomass cf. EU requirements for sustainable production and processing of biomass in directive 2009/28EC, Renewable Energy Directive (RED) with up to 90% CO_2 reduction cf. the ISCC certification, International Sustainability and Carbon Certification.

HVO100 Bio is practically free of aromatics, polycyclic aromatic compounds, olefins, sulphur, nitrogen and metals, and with its much higher cetane number is more prone to ignite in the combustion process than ordinary diesel. These properties provide improved combustion and help reduce the local emissions of particulate matter, NOx, hydrocarbons and carbon monoxide compared to the use of ordinary diesel.

The fuel is colourless and almost odourless.

Can be used in road motor vehicles, tractors and mobile non-road machines as a replacement for diesel. Can be mixed with traditional diesel and GTL Fuels.

Specifications

HVO100 Bio complies with the specification EN 15940 Class A for paraffinic fuels. In addition, other specifications are met: The generic US diesel standard, ASTM D975, EU Fuel Quality Directive 98/70 / EC. Except for the density, the product also complies with the European diesel specification EN590.

HVO100 Bio is 100% bio-based and meets the requirements for reduction of greenhouse gases from transport and the law on sustainable biofuels.
Does not contain FAME.

Cold Flow Properties

Feature – typical values	**Summer** 1/4 - 30/11	**Winter** 1/12 - 31/3
Cold Filter Plugging Point (CFPP), max. °C	÷12	÷24
Cloud Point, max. °C	÷11	÷23

Typical Energy Data

Feature	**Typical value**
Lower calorific value, MJ/kg	44,0
Energy Content, kWh/l	9,5

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Typical data

EN15940 class A

Feature	Unit	Minimum	Maximum	Method
Cetane number		70,0		EN 15195
Density at 15 °C	kg/m^3	765,0	800,0	EN ISO 12185
Total aromatic content	% (m/m)		1,0	EN 12916
Sulphur content	mg/kg		5,0	EN ISO 20846 EN ISO 20884
Flash point	°C	>55[1]		EN ISO 2719
Carbon residue (@ 10 % distillation residue)	% (m/m)		0,30	EN ISO 10370
Ash content	% (m/m)		0,01	EN ISO 6245
Water content	mg/kg		200	EN ISO 12937
Total contamination, impurities	mg/kg		24	EN 12662
Copper corrosion (3 hours @ 50 °C)		Class 1		EN ISO 2160
Oxidation stability	g/m^3		25	EN ISO 12205
Oxidation stability	hours	20		EN 15751
Lubricity, corrected (1,4) @ 60 °C	µm		460	EN ISO 12156-1
Viscosity @ 40 °C	mm^2/s	2,00	4,50	EN ISO 3104
Distillation 95 % (v/v)	°C		360	EN ISO 3405
Distillation % (v/v) @ 250 °C	% (v/v)		<65	EN ISO 3405
Distillation % (v/v) @ 350 °C	% (v/v)	85		EN ISO 3405

[1]HVO100 Bio >60°C

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Definitions

Density	Mass of substance per unit volume.
Viscosity	Is a measure of the resistance to flow
Flash point	The lowest temperature at which the fuel deliver a vapor that is flammable
Ash	The weight of the ash left after the oil has combusted.
Conradson Carbon Residue	Is indicating the tendency of carbon generation by heating the oil with deficit of oxygen.
Cetane number	In the diesel engine, the fuel ignites during the compression heat, and the cetane number indicates how willingly this is done.
Distillation	T 95 % - the temperature at which 95% of the product is vaporized.
Cold Filter Plugging Point (CFPP)	The temperature at which the fuel can be expected to block a standard filter under standard conditions due to crystallization of paraffin.
Cloud Point	The temperature at which the fuel, when cooled, begins to congeal and present a cloudy appearance owing to the formation of wax.

Material Safety Data Sheet

Guidance on Health and Safety is available on the Material Safety Data Sheet, which can be downloaded www.dccenergi.dk.

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