



Hvo



Reduce your net carbon emissions by up to 90%

Inver HVO

Introducing Inver HVO

Inver Renewable Diesel, also known as hydrotreated vegetable oil or HVO, it is an advanced renewable diesel fuel derived from 100% renewable waste streams through hydrotreatment and isomerisation. It is a recognised BioFuel.

Inver HVO fuel is available for delivery to any site in Ireland. This waste derived renewable fuel also has a wide range of OEM approvals for use in modern diesel engines and off-road machinery. Inver advises that customers take advice from their OEM supplier prior to using HVO.

Inver HVO fuel is a paraffinic Renewable Diesel fuel which meets the requirements of EN15940:2017 Class A and ASTM D975 and is available for delivery to any site in Ireland. Inver advises that customers take advice from their OEM supplier prior to using fuels that meet the above standards.





HVO reduces carbon emissions and promotes a sustainable future.

The Benefits of Inver HVO

Give your business the HVO advantage

- Up to net 90% reduction in greenhouse emissions
- Renewable and sustainable: synthesised from waste fats and vegetable oils, eliminating up to 90% of greenhouse gas emissions and reducing NOx, PM and CO emissions in addition to recycling waste
- Drop-in replacement for regular diesel & gas oil: meets ASTM D975, EN15940 standard for paraffinic fuels and Fuel Quality Directive 2009/30/EC Annex II. Compliant with the Renewable Energy Directive (EU) 2018/2001. A wide range of OEM approvals means it can often be used without needing engine and machinery modification
- Excellent cold-weather performance: higher cetane number (up to 90) and cold filter plugging point (CFPP)(-32C) provides better starting performance, clean combustion and less chance of waxing in extreme temperatures
- High flashpoint: improved safety, storage and handling compared to regular diesel
- Reduced need for regular testing: impurities are removed during the production process, eliminating the key factors for fuel degradation and increasing shelf life to around 10 years

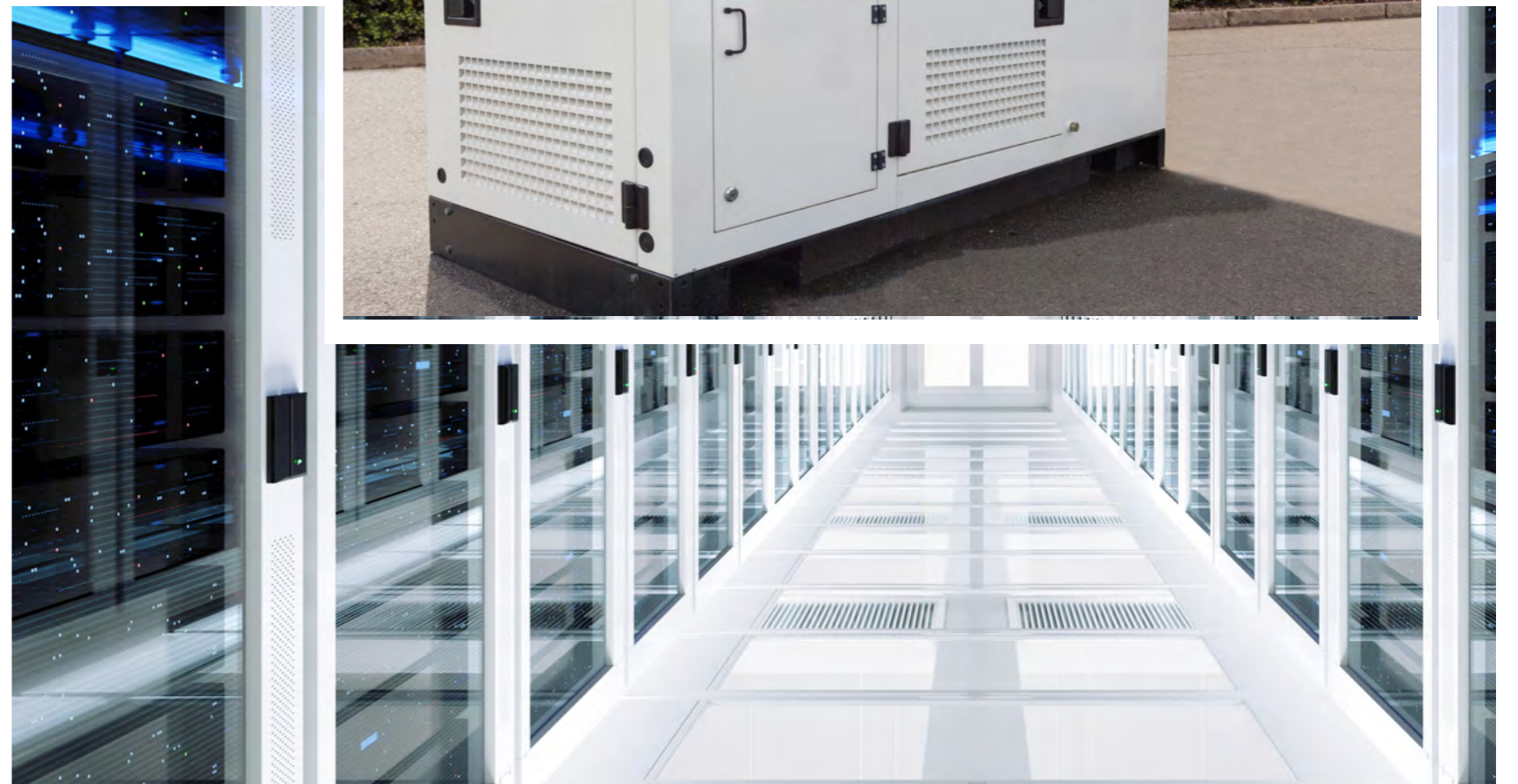
Change is coming, so why not lead the way with Inver HVO fuel?

HVO fuel offers a fast and simple step towards reducing your greenhouse gas CO2 emissions by around 90%. The feed stocks used to manufacture Inver HVO are 100% waste, drawn from sources which have bypassed damage to the environment, natural ecosystem and the drive for global deforestation.

Approximately, for every 1,000 litres of diesel consumed, you will produce 3.6 tonnes of greenhouse gas CO2, compared to just 0.195 tonnes GHG CO2 for every 1,000 litres of HVO consumed.

As a highly versatile renewable fuel, Inver HVO can be used readily in the following applications:

- Transport – either blended to remain in spec with EN 590 Diesel or used 100% as a renewable replacement, Inver HVO can be easily transported, stored and dispensed much like Diesel is now. Most Diesel vehicles can use Inver HVO without modification. Due to its chemical properties being almost identical to Diesel, it can be blended in high proportions with Diesel and still meet the traditional Diesel Specification EN590.
- Electricity Generation – Inver HVO can be used as a fully renewable replacement for gasoil used in either mobile or backup electricity generation. It can be promptly supplied and easily stored for use when required at short notice;
- Industrial Use – Inver HVO can be used as a replacement for gasoil or fuel oils used in Industrial applications either as a primary or back up fuel. As with the other applications, it can be easily supplied, transported and stored for use with little investment required on site.



What is Inver HVO fuel?

HVO fuel is a synthetic paraffinic fuel made from Biogenic Carbon that's stable, renewable, sustainable and high quality, making it perfectly suited for a wide range of applications including fuel for vehicles, generators and industrial power systems. As a premium-quality second-generation renewable diesel alternative, it's made from 100% renewable raw materials.

HVO is a drop-in alternative to fossil diesel, meeting EN 15940 standards and Fuel Quality Directive 2009/30/EC Annex II. There is no need to modify existing infrastructure – simply order HVO diesel today and go.

Property		Inver HVO Typical values	EN 15940:2016 + A1:2018 + AC:2019 Class A	EN 590:2013 + A1:2017	ASTM D975-20 2-D
Appearance at +25 °C		Clear & Bright			
Cetane number		> 70	≥ 70	≥ 51.0	≥ 40
Cetane index		No requirement (calculating formula invalid)	No requirement (calculating formula invalid)	≥ 46.0	≥ 40
Density at +15 °C	kg/m ³	780	765.0...800.0	820.0...845.0 ≥ 800.0 *	No requirements
Total aromatics	% (m/m)	Below detection limit	≤ 1.1	Not regulated by EN 590	≤ 35
Polyaromatics	% (m/m)	Below detection limit	Not regulated by EN 15940	≤ 8.0	
Sulphur	mg/kg	≤ 5.0	≤ 5.0	≤ 10.0	≤ 15
FAME-content	% (V/V)	0	≤ 7.0	≤ 7.0	≤ 5.0
Flash point	°C	> 70	> 55.0	> 55.0	≥ 52
Carbon residue on 10% distillation residue	% (m/m)	< 0.1	≤ 0.30	≤ 0.30	≤ 0.35
Ash	% (m/m)	< 0.001	≤ 0.010	≤ 0.010	≤ 0.01
Water	% (m/m)	< 0.010	≤ 0.020	≤ 0.020	
Total contamination	mg/kg	< 12	≤ 24	≤ 24	
Water and sediment	% (V/V)	< 0.01			≤ 0.05
Copper corrosion		Class 1a	Class 1	Class 1	Class 3
Oxidation stability	g/m ³ h	< 2 Not relevant since no FAME	≤ 25 ≥ 20 **	≤ 25 ≥ 20 **	
Lubricity HFRR at 60 °C	µm	< 460 *** ≈ 650 ****	≤ 460	≤ 460	≤ 520
Viscosity at 40 °C	mm ² /s	3	2.000...4.500	2.000...4.500 1.200...4.000 *	1.9...4.1
Initial boiling point	°C	200	Report		
Evaporated at 250 °C	% (V/V)	5	< 65	< 65	
Evaporated at 350 °C	% (V/V)	> 97	≥ 85	≥ 85	
Distillation 90% (V/V)	°C				282...338
Distillation 95% (V/V)	°C	295	≤ 360.0	≤ 360.0	
Cloud point	°C	Severe winter grades available	As in EN 590	≤ -10*...≤ -34*	
CFPP	°C	Close to cloud point		≤ +5...≤ -44*	
Antistatic additive		Added			
Conductivity	pS/m	≥ 50*****			≥ 25

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*) Severe winter and arctic grades ***) Additional requirement if contains above 2 % (V/V) FAME. Method that applies in this case is Rancimat, EN15751

****) Including lubricity additive when delivered to be used as such in vehicles that are validated for EN 15940 fuel

*****) If delivered without lubricity additive to be used as a blending component, preference is to add lubricity additive into the final blend

*****) Including electrical conductivity additive

Our Fuel Quality

Laboratory tested and independently assured



Lab Certified

Tested by a certified laboratory at the refinery of origin prior to loading the oil tanker.



Quality Tested

Tested for quality assurance prior to receipt from the oil tanker at Inver's import terminals and samples from each individual cargo are retained.



Independently Surveyed

Checked by independent surveyors for quality assurance at the loading refinery and at Inver's import terminals.



Independent Quality Assured Testing

Tested by independent surveyors and laboratories to insure quality assurance.



Certified Quality

Provided with Certificates of Quality for each individual cargo showing that the fuels meet EU and Irish specifications.

Supplied directly to your facility



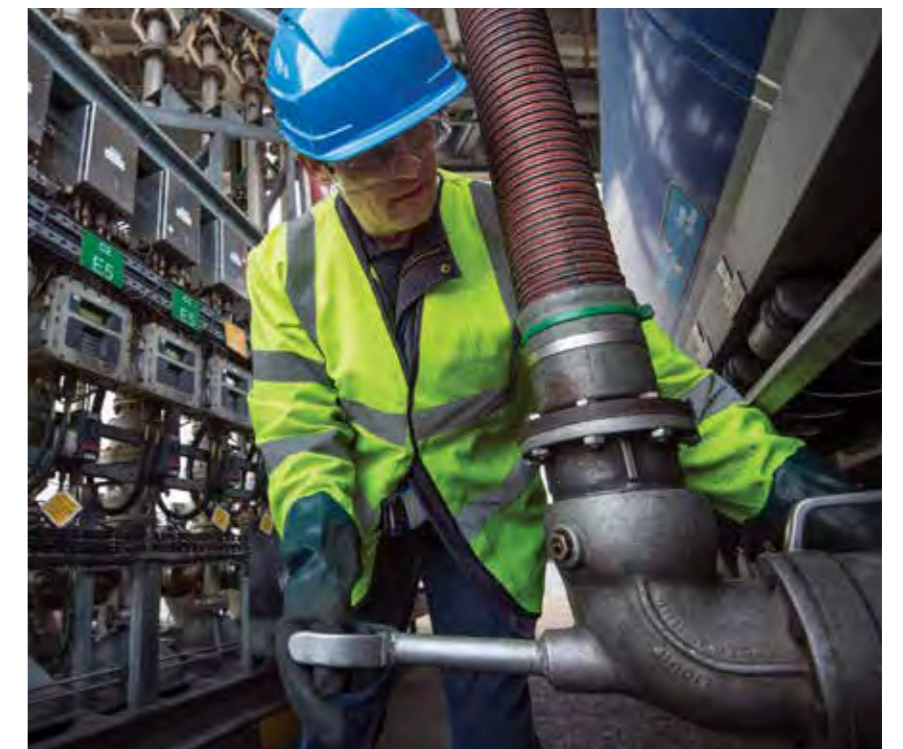
Inver - Controlled Delivery

Inver fuels are supplied directly from our co-owned terminal in Foynes, Limerick.



Quality Fuel Programme

Our Quality Assured Fuels programme gives our customers the assurance that fuels supplied by Inver meet national and European fuel standards and have complete traceability from the point of manufacture to our customers.



Contact us today!

If you're looking for a bulk supplier of the clean-burning, environmentally-friendly alternative to mineral diesel, with the added benefit of a significantly longer shelf life, get in touch with our friendly team today for a HVO Quote.



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