Safety Data Sheet

1.0 IDENTIFICATION OF THE SUBSTANCE / MIXTURE

1.1 Product Identification

Substance	**Renewable Hydrocarbons (Diesel type fraction)**
Commercial Product Name	**HVO – Hydrotreated Vegetable Oil**
Synonyms	**Renewable Diesel, Paraffinic Diesel**
EC no. *(No CAS no.)*	**700-571-2**
ECHA Registration No.	**n/a**

1.2 Relevant identified uses of the substance or mixture and uses advised against

Specific Use(s)	As diesel fuel in dedicated diesel vehicle fleets and diesel engines
Exposure Scenario(s)	n/a
Uses Advised Against	n/a
Chemical Safety Report	n/a

1.3 Details of the supplier of the SDS

Company	**Inver Energy Limited** **River House** **Blackpool Park** **Blackpool** **Cork, Ireland**
Telephone No.	**+353 (0)21 4396950**
Email	inver@inverenergy.com

1.4 Emergency telephone number

Emergency telephone number	**+44 1235 836 100**	**(NCEC)**
Opening Hours	**24/7**	

2.0 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to GB CLP Regulation (EC 2008/1272/GBRET)

CLP-Classification: The product is classified as hazardous in accordance with Directive GHS

Flam. Liq. 3	H226
Asp.Tox. 1	H304

For the full text of classification codes and/or H-phrases in this section, see section 2.2 below

2.2 Label elements

Labelling according to GB CLP Regulation (EC 2008/1272/GBRET)

CLP pictograms:

GHS02 GHS08

Signal word: Danger

CLP Hazard statements:
H226 - Flammable liquid and vapour
H304 - May be fatal if swallowed and enters airways

EUH066 – Repeated exposure may cause skin dryness or cracking

CLP Precautionary statements:
P260 - Do not breath dust/fumes/gas/mist/vapours/spray
P280 - Wear protective gloves
P273 - Avoid release to the environment
P301+P310 - If swallowed, immediately call a doctor
P331 - Do NOT induce vomiting
P403 + P235 – Store in a well-ventilated place. Keep cool
P501 - Dispose of contents/container to hazardous or special waste collection point

2.3 Other Hazards

No other hazards

3.0 COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Substance name	Product Identifier	%	Classification according to (EC 2008/1272/GBRET) [CLP / GHS]
Renewable Hydrocarbons (diesel type fraction)	CAS no: n/a EC no: 700-571-2	100	H226 - Flam. Liq. 3 H304 - Asp.Tox. 1 EUH066

For the full text of classification codes and/or H-phrases in this section, see section 2.2

3.2 Mixtures

Not applicable

4.0 FIRST AID MEASURES

4.1 Most important symptoms and effects, both acute and delayed

Inhalation: Inhalation of high vapour concentrations may cause irritation of respiratory tract, causing symptoms like headache, dizziness, tiredness, nausea and vomiting.

Skin contact: Repeated exposure may cause skin dryness or cracking.

Eye contact: Contact with eyes may cause irritation.

Ingestion: Harmful: may cause lung damage if swallowed
Ingestion may cause nausea, or diarrhoea.

4.2 Description of first aid measures

Inhalation: Keep at rest.
Move to fresh air.
Obtain medical assistance if breathing remains difficult.

Skin contact: After contact with skin, remove contaminated clothing and footwear and wash immediately with plenty of soap and water.
If skin irritation persists, seek medical attention.

Eye contact: Rinse immediately with plenty of water for several minutes, remove contact lenses if present and easy to do so, continue rinsing, including under the eyelids for at least 15 minutes.
If irritation, blurred vision or swelling occurs and persists, obtain medical attention.

Ingestion: Always assume that aspiration has occurred and seek professional medical attention or send the casualty to a hospital.
Do NOT wait for symptoms to develop.
Do NOT induce vomiting.
Rinse mouth.

5.0 FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:	Use foam, water spray, dry chemical powder, CO2, sand, or earth.
Extinguishing media which shall not be used for safety reasons:	Direct water jets which may splatter and spread the fire

5.2 Special hazards arising from the substance or mixture

Fire Hazard:	Combustible material
Specific hazards:	Vapours may form explosive mixture with air. Vapours are heavier than air and may spread along floors. Flash back possible over considerable distance. The pressure in sealed containers can increase under the influence of heat. Cool containers / tanks with water spray. Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates and gases, including carbon monoxide and unidentified organic and inorganic compounds. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

5.3 Advice for firefighters

Special protective equipment for fire-fighters:	Wear personal protective equipment. Wear self-contained breathing apparatus for firefighting if necessary.

6.0 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions:	Wear personal protective equipment. See also section 8. Evacuate personnel to safe areas (upwind from the spill). Remove all potential ignition sources out of the area. Avoid contact with skin, eyes and clothing. Do not breathe vapours or spray mist.

6.2 Environmental precautions

Environmental precautions:	Do not flush into surface water or sanitary sewer system.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up:	Prevent further leakage or spillage if safe to do so. For small quantities, soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust), sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water. Dispose of in accordance with local regulations. For larger spills, specialist spill recovery services may be required.

7.0 HANDLING AND STORAGE

7.1 Precautions for safe handling

Handling: Take precautionary measures against static electricity and avoid splash filling of bulk volumes.
Avoid contact with skin. Avoid breathing fume/mist. **Do not ingest.**
Prevent the risk of slipping.
Use adequate personal protective equipment as required.

7.2 Conditions for safe storage, including any incompatibilities

Storage: Storage installations should be designed with adequate bunds so as to prevent ground and water pollution in case of leaks or spills.
Store separately from incompatible materials (section 10.5).

Recommended materials: For containers, or container linings use carbon steel, stainless steel.

Unsuitable materials: Some synthetic materials may be unsuitable for containers or container linings depending on the material specification and intended use. Compatibility should be checked with the manufacturer.

Hygiene measures: Ensure that proper housekeeping measures are in place.
Keep away from food and beverages.
Wash hands and face before breaks and immediately after handling the product.
Change contaminated clothes at the end of working shift.

7.3 Specific end use(s)

Specific use(s):

8.0 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Renewable Hydrocarbons (diesel type fraction) EC 700-571-2

DNELs

Workers				
Route of exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects
Inhalation	no-threshold effect and/or no dose-response information available			147 mg/m³
Dermal	no-threshold effect and/or no dose-response information available			42 mg/kg bw/day
Eyes	low hazard (no threshold derived)			

Consumers				
Route of exposure	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects
Inhalation	no-threshold effect and/or no dose-response information available			94 mg/m³
Dermal	no-threshold effect and/or no dose-response information available			18 mg/kg bw/day
Oral	no-threshold effect and/or no dose-response information available			18 mg/kg bw/day
Eyes	low hazard (no threshold derived)			

PNECs

Environmental protection target	PNEC
Fresh water	0.01 mg/L
Freshwater sediments	3.81 mg/kg sediment dw
Marine water	0.01 mg/L
Marine sediments	3.73 mg/kg sediment dw
Food chain (hazard for predators)	33.3 mg/kg food
Microorganisms in sewage treatment	10 mg/L
Soil (agricultural)	761 mg/kg soil dw
Air	No hazard identified

8.2 Exposure controls

Appropriate Engineering Controls
HVO is normally contained in fully closed fuel handling systems (atmospheric bulk storage tanks, fixed pipework systems, bottom loading systems with API type dry break couplings and sealed road tankers).

Personal Protection Equipment

Respiratory protection: In case of insufficient ventilation wear suitable respiratory equipment. Use full or half-face masks with filter for hydrocarbon vapours (AX). (EN 136/140/145)

Body protection: Long-sleeved antistatic clothing. If necessary, refer to the EN 340 and related standards, for definition of characteristics and performance according to the risk rating of the area. Wash contaminated clothing before reuse. Antistatic, oil resistant, non-skid safety shoes or boots.

Hand protection: When there is a risk of contact with the skin, use hydrocarbon-resistant gloves. Adequate materials include: nitrile (NBR) or PVC with a protection index > 5 (permeation time > 240 mins) or refer to EN374 for assessment of alternative materials. The selection of specific gloves for a specific application and time of use in a working area, should also consider other factors in the working space, such as (but not limited to): other chemicals that are possibly used, physical requirements (protection against cutting/drilling, skill, thermal protection), and the instructions/specification of the glove supplier.

Eye protection: Use EN 166 compliant safety glasses or goggles appropriate to the task being undertaken.

Environmental Exposure Controls
Refer to Engineering controls above and to Section 6 of this SDS

9.0 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state:	liquid
Colour:	colourless, clear and bright
Odour:	slight petroleum type odour
Melting point/range:	-20°C
Boiling point/boiling range:	242°C
Flammability:	Combustible
Explosion limits:	0.6 – 7.5 vol % (Reference: Fuels, Diesel - Gasoil, unspecified)
Flash point:	> 55°C
Autoignition temperature:	204°C
pH:	not applicable
Viscosity (kinematic):	2.0 – 4.5 mm/s² @ 40°C
Solubility:	not soluble in water
Partition coefficient:	~ 8.4 @ 20°C (n-octanol/water)
Vapour pressure:	~ 90Pa @ 25°C
Density:	780 - 810kg/m³ @ 15°C

9.2 Other information

Not applicable

10.0 STABILITY AND REACTIVITY

10.1 Reactivity

Reactivity: Flammable liquid

See also section 10.5

10.2 Chemical stability

Stable under normal conditions

10.3 Possibility of hazardous reactions

None (in normal conditions of storage and handling)

10.4 Conditions to avoid

Conditions to avoid: Heat, flames and sparks

10.5 Incompatible materials

Incompatible materials: Contact with strong oxidizers (peroxides, chromates, etc.) may cause a fire hazard

10.6 Hazardous decomposition products

Hazardous decomposition products: Burning produces noxious and toxic fumes

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute exposure toxicity
Based on available data, the classification criteria are not met.

Skin Corrosion/irritation
EUH066 – Repeated exposure may cause skin dryness or cracking

Serious eye damage/irritation
Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation
Based on available data, the classification criteria are not met.

Germ cell mutagenicity
Based on available data, the classification criteria are not met.

Reproductive Toxicity
Based on available data, the classification criteria are not met.

STOT single exposure
Based on available data, the classification criteria are not met.

STOT repeated exposure
Based on available data, the classification criteria are not met.

Aspiration Hazard
Asp. Tox 1
H304 – May be fatal if swallowed and enters airways

11.2 Information on other hazards

No other relevant information available

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Based on available data, the classification criteria are not met.

12.2 Persistence and degradability

Readily biodegradable in aquatic environments

12.3 Bioaccumulative potential

Bioaccumulation:	Potential for limited bioaccumulation.
Partition coefficient:	~ 8.4 (n-octanol/water)

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Does not meet the criteria to be PBT or vPvB

12.6 Endocrine Disrupting Properties

No data available

12.7 Other adverse effects

No data available

13.0 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste from residues / unused products:	Where possible, recycling via a competent waste oil recovery contractor is preferred to energy recovery, incineration or landfill.
Contaminated packaging:	Do not burn, or use a cutting torch on, the empty drum. Do not puncture or incinerate. Where possible, re-use or recycle.
Codes of waste (SI 2005/894):	The following Waste Codes are only suggestions: 130701 – fuel oil and diesel 150110 - packaging containing residues of or contaminated by dangerous substances. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.
Sewage disposal:	DO NOT dispose of into sewage systems or surface water drainage systems

14. TRANSPORT INFORMATION

14.1 UN Number

UN number: 1202

14.2 UN proper shipping name

Proper shipping name: DIESEL FUEL

14.3 Transport hazard class(es)

14.3.1 Overland transport (ADR / RID)

Class:	3 - Flammable liquids
Danger code:	30
ADR classification code:	F1
ADR danger labels:	3 - Flammable liquid

Orange plates:

Tunnel restriction code:	D/E
Limited quantities:	5l
Excepted quantities:	E1

14.3.2 Transport by sea (IMDG)

Classification code:	F1
Limited quantities:	5l
Excepted quantities:	E1
EmS:	F-E, S-E
Stowage category	A

14.3.4 Inland waterway transport (ADN)

Classification code:	F1
Limited quantities:	5l
Excepted quantities:	E1

14.3.3 Air transport (IATA)

Class:	3 - Flammable liquids
PCA Excepted quantities:	E1
PCA limited max net quantity:	10L
PCA max net quantity:	60L
CAO max net quantity:	220L

14.4 Packing group

Packing group: III

14.5 Environmental hazards

Marine pollutant: No

Other information (transport) : No supplementary information available.

14.6 Special precautions for users

No data available

14.7 Maritime transport in bulk according to IMO instruments

Product name:	Bio-fuel blends of diesel/gas oil and Alkanes (C9-C24) linear, branched and (>25% but <99% by volume)
Ship type:	2
Pollution category:	X
Note:	Electrical equipment class T3 and group IIA if flash point <60°C

15.0 REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

No additional legislative information specific to the substance

15.2 Chemical Safety Assessment

Chemical Safety Assessment: A chemical safety assessment will be available once full joint submission completed under UK REACH (by 27th Oct 2023).

16.0 OTHER INFORMATION

(i) Version 3. Addition of 24/7 Emergency number in section 1

(ii) The contents and format of this SDS are in accordance with the ECHA Guidance on the compilation of safety data sheets, version 4.0 December 2020 **ISBN**: 978-92-9481-787-7

(iii) Data used in this SDS has been sourced from the ECHA disseminated REACH dossier information for Renewable Hydrocarbons (Diesel type fraction) EC 700-671-2

(iv) List of Abbreviations:

SDS	Safety Data Sheet
ECHA	European Chemicals Agency
CLP	Classification, Labelling and Packaging Regs.
GHS	Globally Harmonised System [of classification]
HVO	Hydrogenated Vegetable Oil
DNEL	Derived No Effect Level
PNEC	Predicted No Effect Concentration
REACH	Registration, Evaluation and Authorisation of Chemicals
ADR	Agreement for the transportation of dangerous goods by road
ADN	International Carriage of Dangerous Goods by Inland Waterways
RID	International Carriage of Dangerous Goods by Rail
PBT	Persistent, Bio-accumulative and Toxic
vPvB	Very Persistent and very Bio-accumulative
PCA	Passenger Carrying Aircraft
CAO	Cargo Aircraft Only
STOT	Single Target Organ Toxicity
PVC	Polyvinyl Chloride