

SAFETY DATA SHEET**HVO100**

The safety data sheet is in accordance with Commission Regulation (EU) 2020/878 of 18 June 2020 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

SECTION 1: Identification of the substance / mixture and of the company /undertaking

Date issued 23.01.2020

Revision date 04.04.2025

1.1. Product identifier

Product name HVO100

UFI 1500-C029-G00S-D7N5

Synonyms HVO100 (former product name until 31/12-2021)

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

Product group Fuel

Use of the substance / mixture Fuel for diesel engines
Distribution of substance, industrial
Use as a fuel, industrial
Use as a fuel, professional
Use as a fuel, consumer

Uses advised against Other uses than those mentioned above.

1.3. Details of the supplier of the safety data sheet

Company name St1 Sverige AB

Postal address Box 11057

Postcode SE-161 11

City Bromma

Country Sweden

Telephone number +46 (0) 31 744 6000

Email Supply-Sweden@st1.se

Website www.st1.se

1.4. Emergency telephone number

Emergency telephone	Telephone number: 111 (NHS)
	Description: For poisoning emergencies (UK)
	Telephone number: 112
	Description: Within Sweden: Ask for Poison Information

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP / GHS]	Asp. Tox. 1; H304
Substance / mixture hazardous properties	EUH 066 May be fatal if swallowed and enters airways. Repeated exposure may cause skin dryness or cracking.

2.2. Label elements

Hazard pictograms (CLP)



Composition on the label	Renewable hydrocarbons (diesel type fraction)
Signal word	Danger
Hazard statements	H304 May be fatal if swallowed and enters airways.
Precautionary statements	P280 Wear protective gloves / protective clothing / eye protection / face protection. P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor / physician. P331 Do NOT induce vomiting. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents / container to an approved waste disposal plant.
Supplemental label information	EUH 066 Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

PBT / vPvB	The mixture does not meet current criteria for PBT (Persistent, bioaccumulative and toxic) or vPvB (very persistent and very bioaccumulative).
Physicochemical effects	Combustible liquid. Combustible vapors can spread, and pose an explosion risk in case of leakage indoors or to drains. The vapors are heavier than air and can accumulate in low-lying areas.
Other hazards	The chemical does not contain any known or suspected endocrine disruptors.

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Substance	Identification	Classification	Contents	Notes
Renewable hydrocarbons (diesel type fraction)	EC No.: 618-882-6 / 700-571-2 REACH Reg. No.: 01-2119450077-42 / 01-2120043692-58	Asp. Tox. 1; H304 EUH 066	~ 100 %	
Description of the mixture	ATE oral: > 2000 mg/kg ATE dermal: > 2000 mg/kg ATE inhalative: 23400 mg/m ³			
Substance comments	See section 16 for explanation of hazard statements (H) listed above.			

SECTION 4: First aid measures

4.1. Description of first aid measures

General	Emergency telephone number: see section 1.4. If medical advice is needed, have safety data sheet or label available at hand.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. If breathing stops, provide artificial respiration.
Skin contact	Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Wash skin with soap and water. Get medical attention if any discomfort continues.
Eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Ingestion	Rinse mouth thoroughly. DO NOT induce vomiting if swallowed chemical is dissolved in petroleum-based material. Danger of aspiration and development of chemical pneumonia. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical attention immediately!

4.2. Most important symptoms and effects, both acute and delayed

Acute symptoms and effects	Skin contact: Repeated exposure may cause skin dryness or cracking. Eye contact: Spray and vapor may cause burning in the eyes. May cause temporary eye irritation. Ingestion: Symptoms such as coughing, breathing difficulties, vomiting or lethargy may indicate chemical pneumonitis.
Delayed symptoms and effects	Symptoms of chemical pneumonia may occur within 24 hours of difficulty breathing and coughing.

4.3. Indication of any immediate medical attention and special treatment needed

Medical monitoring for delayed effects	Delayed effects, such as symptoms of chemical pneumonia after aspiration, should be medically monitored.
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Other information	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	In case of major fire and large quantities: Foam. Water spray, fog or mist. Small fires: Powder. Carbon dioxide (CO ₂). Sand or earth are suitable in small fires.
Improper extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards	Combustible liquid. Vapours may form explosive air mixtures even at room temperature. The vapours are heavier than air and will spread along the floor. May travel considerable distance to source of ignition and flash back. A fire can spread quickly. Risk of re-ignition after the fire has been extinguished. The product floats and can be reignited to burn on water surface.
Hazardous combustion products	May include, but is not limited to: Carbon dioxide (CO ₂). Carbon monoxide (CO). Hydrocarbons. Unspecified organic compounds. Oxides of sulphur (SO _x).

5.3. Advice for firefighters

Personal protective equipment	Firefighters who may be exposed to smoke or thermal decomposition products shall wear all available personal protective equipment (PPE) and SCBA mask.
Other information	If there is no risk involved, move the containers to a safe place. If not possible, cool with water from a safe position. Extinguishing water must not be discharged into drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	Evacuate area. Provide adequate ventilation. Stop leak if safe to do so. Eliminate all ignition sources if safe to do so. If spill is large contact fire department immediately, dial 999 or 112.
Personal protection measures	Avoid inhalation of vapours and contact with skin and eyes. Use protective equipment as referred to in section 8.

6.2. Environmental precautions

Environmental precautionary measures	Do not allow to enter into sewer, water system or soil. Immediately notify the local authorities about any damage.
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6.3. Methods and material for containment and cleaning up

Clean up

Remove ignition sources and work with non-sparking tools.

Small Spillages:

Collect with absorbent, non-combustible material into suitable containers.

Proposals for inert materials: sand, kieselguhr, universal binder.

Collect in a suitable container and dispose as hazardous waste according to section 13.

Large Spillages:

For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water.

6.4. Reference to other sections**Other instructions**

See also sections 7, 8 and 13.

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Handling**

Provide adequate ventilation. Local exhaust is recommended.

Avoid inhalation of vapours and contact with skin and eyes. Observe good chemical hygiene practices. Use protective equipment as referred to in section 8.

Risk for slippery floors and tools if spilled out. Risk of vapour concentration on the floor and in low-lying areas.

Do not reuse wipes. Contaminated rags and cloths must be put in fireproof containers for disposal.

Protective safety measures**Safety measures to prevent fire**

Smoking and naked flames and other ignition sources are prohibited.

Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Take precautionary measures against static discharges.

Ground / bond container and receiving equipment.

Use only non-sparking tools.

Use explosion-proof electrical / ventilating / lighting / / equipment.

Advice on general occupational hygiene

Do not eat, drink or smoke during work. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities**Storage**

Must be stored in a well-ventilated area.

Storage tanks for bulk volumes must be in a bunded area.

Store tanks away from heat and other sources of ignition.

Gases from tanks must not be released into the atmosphere. Evaporation losses during storage must be controlled by an appropriate gas return system.

Conditions for safe storage**Packaging compatibilities**

Recommended container materials:
carbon steel or stainless steel.

Advice on storage compatability

Keep away from:
Strong oxidizing agents. Food and feed.

7.3. Specific end use(s)**Specific use(s)**

See section 1.2. See exposure scenario.

SECTION 8: Exposure controls / personal protection**8.1. Control parameters**

Substance	Identification	Exposure limits	TWA Year
Oil mist (mineral particles)		Limit value (8 h) : 1 mg/m ³	

Other Information about threshold limit values

References (laws/regulations): Swedish regulation on exposure limits: Arbetsmiljöverkets föreskrifter och allmänna råd om hygieniska gränsvärden, "Hygieniska gränsvärden", AFS 2018:1

DNEL / PNEC**DNEL**

Group: Professional
Route of exposure: Long-term inhalation (systemic)
Value: 147 mg/m³

Group: Professional
Route of exposure: Long-term dermal (systemic)
Value: 42 mg/kg bw/day

Group: Consumer
Route of exposure: Long-term inhalation (systemic)
Value: 94 mg/m³

Group: Consumer
Route of exposure: Long-term dermal (systemic)
Value: 18 mg/kg bw/day

PNEC

Comments: No data available

DMEL

Comments: No data available

8.2. Exposure controls**Precautionary measures to prevent exposure****Technical measures to prevent exposure**

Provide adequate ventilation. Observe Occupational Exposure Limits and minimise the risk of inhalation of vapours.
Local exhaust ventilation is recommended, but adequate general ventilation may be sufficient.
Explosion-proof general and local exhaust ventilation.
The personal protective equipment must be CE-marked and the latest version of the standards shall be used. The protective equipment and the specified standards recommended below are only suggestions, and should be selected on advice from the supplier of such equipment.

A risk assessment of the work place/work activities (the actual risk) may lead to other control measures. The protection equipment's suitability and durability will depend on application.

Eye / face protection

Eye protection equipment

Description: Wear approved chemical safety goggles where eye exposure is reasonably probable.

Reference to relevant standard: EN 166 (Personal eye-protection. Specifications).

Additional eye protection measures

Eye wash facilities should be available at the work place. Either a fixed eye wash facility connected to the drinking water (preferably warm water) or a portable disposable unit.

Hand protection

Suitable materials

Nitrile.

For incidental contact/splash protection, Neoprene, PVC gloves may be suitable.

Breakthrough time

Comments: Nitrile: > 240 minutes.

Thickness of glove material

Comments: Glove thickness must be chosen in consultation with the glove supplier.

Hand protection equipment

Description: Use protective gloves that are suitable for the application. The gloves abilities may vary among the different glove manufacturers.

Reference to relevant standard: EN ISO 374 (Protective gloves against chemicals and micro-organisms).

EN 420 (Protective gloves - General requirements and test methods).

Additional hand protection measures

Gloves must only be worn on clean, dry hands.

Wash promptly with soap & water if skin becomes contaminated.

Skin protection

Recommended protective clothing

Description: At risk of splashing:

Wear impervious protective clothing, gloves, apron and boots.

Additional skin protection measures

Emergency shower should be available at the workplace.

Remove contaminated clothing and wash the skin thoroughly with soap and water after work.

Wash contaminated clothing before reuse.

Respiratory protection

Recommended respiratory protection

Description: In case of insufficient ventilation, use respirator with A filter against solvent vapors.

At work in confined or poorly ventilated spaces, respiratory protection with air supply must be used.

Reference to relevant standard: EN 14387 (Respiratory protective devices. Gas filter(s) and combined filter(s). Requirements, testing, marking).

Appropriate environmental exposure control

Environmental exposure controls

Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.

Do not allow to enter into sewer, water system or soil.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid. Clear
Colour	Colourless.
Odour	Hydrocarbon.
Odour limit	Comments: Data lacking.
pH	Comments: Not relevant.
Melting point / melting range	Value: < 0 °C
Boiling point / boiling range	Value: 180 - 330 °C
Flash point	Value: > 60 °C
Flammability	Combustible but not flammable.
Explosion limit	Comments: Data lacking.
Vapour pressure	Value: < 0,1 kPa Temperature: 37,8 °C
Vapour density	Value: > 1 Comments: Air=1.
Particle characteristics	Comments: Not relevant for liquids.
Density	Value: 765 - 800 kg/m ³ Temperature: 15 °C
Solubility	Comments: Insoluble in water.
Partition coefficient: n-octanol/ water	Comments: Data lacking.
Auto-ignition temperature	Value: > 204 °C
Decomposition temperature	Comments: Data lacking.
Viscosity	Value: 2 - 4,5 mm ² /s Temperature: 40 °C Type: Kinematic

9.2. Other information

Physical hazards

Oxidising liquids	Assessment: Not oxidizing.
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9.2.2. Other safety characteristics

Evaporation rate	Data lacking.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Under normal conditions and use there are not expected any reactivity hazards for this chemical.

10.2. Chemical stability

Stability Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None known under normal use conditions.

10.4. Conditions to avoid

Conditions to avoid Heat, sparks or open flame.

10.5. Incompatible materials

Materials to avoid Strong oxidizing agents.

10.6. Hazardous decomposition products

Hazardous decomposition products None under normal conditions. See also section 5.2.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Effect tested: LC50
Route of exposure: Oral
Value: > 2000 mg/kg
Species: Rat

Effect tested: LD50
Route of exposure: Dermal
Value: > 2000 mg/kg
Species: Rat

Effect tested: LC50
Route of exposure: Inhalation.
Duration: 8 hour(s)
Value: 23400 mg/m³
Species: Rat

Other information regarding health hazards

Assessment of acute toxicity, classification Based on available data, the classification criteria are not met.

Skin corrosion / irritation, other information Prolonged contact may cause redness, irritation and cracking.

Assessment of skin corrosion / irritation, classification Based on available data, the classification criteria are not met.

Assessment of eye damage or irritation, classification	Based on available data, the classification criteria are not met.
Assessment of respiratory sensitisation, classification	Based on available data, the classification criteria are not met.
Assessment of skin sensitisation, classification	Based on available data, the classification criteria are not met.
Assessment of germ cell mutagenicity, classification	Based on available data, the classification criteria are not met.
Assessment of carcinogenicity, classification	Based on available data, the classification criteria are not met.
Assessment of reproductive toxicity, classification	Based on available data, the classification criteria are not met.
Assessment of specific target organ toxicity - single exposure, classification	Based on available data, the classification criteria are not met.
Assessment of specific target organ toxicity - repeated exposure, classification	Based on available data, the classification criteria are not met.
Assessment of aspiration hazard, classification	May be fatal if swallowed and enters airways.

Symptoms of exposure

In case of ingestion	Risk of chemical pneumonia (pneumonitis) if aspirated during and after ingestion. Symptoms such as coughing, breathing difficulties, vomiting or lethargy may indicate chemical pneumonitis.
In case of skin contact	Repeated exposure may cause skin dryness or cracking.
In case of inhalation	Inhalation of oil mist or vapors formed during heating of the chemical, will cause respiratory irritation and coughing. In high concentrations, vapours are narcotic and may cause headache, fatigue, dizziness and nausea.
In case of eye contact	May cause temporary eye irritation. May cause stinging and redness.

11.2 Other information

Endocrine disruption	The chemical does not contain any known or suspected endocrine disruptors.
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SECTION 12: Ecological information

12.1. Toxicity

Aquatic toxicity, fish	Value: > 1000 mg/l Effect dose concentration: LL50
Aquatic toxicity, algae	Value: > 100 mg/l Effect dose concentration: EL50
Aquatic toxicity, crustacean	Value: > 100 mg/l Effect dose concentration: EL50
Ecotoxicity	The chemical is not classified as environmentally hazardous. However, this does

not exclude the possibility that large or frequent spills may be potentially hazardous.

12.2. Persistence and degradability

Persistence and degradability, comments	Expected to be readily biodegradable. Volatile solvents are rapidly oxidized by photochemical reaction in air.
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12.3. Bioaccumulative potential

Bioaccumulative potential	The product contains potentially bioaccumulating substances.
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12.4. Mobility in soil

Mobility	Floats on water. The product contains substances, which are bound to particulate matter and are withheld in the earth. May contaminate soil and groundwater.
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12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	The mixture does not meet current criteria for PBT (Persistent, bioaccumulative and toxic) or vPvB (very persistent and very bioaccumulative).
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12.6. Endocrine disrupting properties

Endocrine disrupting properties	The chemical does not contain any known or suspected endocrine disruptors.
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12.7. Other adverse effects

Additional ecological information	Forms an oil film on water surfaces that may harm organisms in the water and disrupt oxygen transport in the boundary layer between air and water. Avoid release to the environment.
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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Appropriate methods of disposal for the chemical	Do not empty into drains. Recover and reclaim or recycle, if practical. Disposed of as hazardous waste by approved contractor. The waste code (EWC-Code) is intended as a guide. The code must be chosen by the user, if the use differs from the one mentioned below.
Appropriate methods of disposal for the contaminated packaging	Container disposal: Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not, puncture, cut, or weld uncleaned drums. Send to drum recoverer or metal reclaimer. Do not pollute the soil, water or environment with the waste container.
EWC waste code	EWC waste code: 130701 fuel oil and diesel Classified as hazardous waste: Yes EWC waste code: 130703 other fuels (including mixtures) Classified as hazardous waste: Yes

SECTION 14: Transport information

Dangerous goods Yes

14.1. UN number

ADR/RID/ADN 1202

IMDG 1202

ICAO/IATA 1202

Comments Diesel fuel with flash point > 60 °C is not classified under IMDG or IATA.

14.2. UN proper shipping name

Proper shipping name English DIESEL FUEL

ADR/RID/ADN

ADR/RID/ADN DIESEL FUEL

IMDG DIESEL FUEL

ICAO/IATA DIESEL FUEL

Comments Alternative proper shipping names: HEATING OIL, LIGHT or GAS OIL
Diesel fuel with flash point > 60 °C is not classified under IMDG or IATA.

14.3. Transport hazard class(es)

ADR/RID/ADN 3

Classification code ADR/RID/ADN F1

IMDG 3

ICAO/IATA 3

Comments Diesel fuel with flash point > 60 °C is not classified under IMDG or IATA.

14.4. Packing group

ADR/RID/ADN III

IMDG III

ICAO/IATA III

Comments Diesel fuel with flash point > 60 °C is not classified under IMDG or IATA.

14.5. Environmental hazards

IMDG Marine pollutant No

14.6. Special precautions for user

Special safety precautions for user Follow loading regulations in ADR/RID/IMDG/ICAO-TI

14.7. Maritime transport in bulk according to IMO instruments

Product name	Energy-rich fuels MARPOL Annex I rules apply for bulk shipments by sea. Please also refer to MEPC.1/Circ.879 -GUIDELINES FOR THE CARRIAGE OF ENERGY-RICH FUELS AND THEIR BLENDS.
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Additional information

Hazard label ADR/RID/ADN	3
Hazard label IMDG	3
Hazard label ICAO/IATA	3

ADR/RID Other information

Tunnel restriction code	D/E
Transport category	3
Hazard No.	30

IMDG Other information

Additional information IMDG	Fp > 60 °C
EmS	F-E, S-E

SECTION 15: Regulatory information

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

References (laws/regulations)	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP-regulation) with later amendments. Regulation (EC) No 1907/2006 on the registration, evaluation, authorization and restriction of chemicals (REACH Regulation), with later amendments. European Waste Catalogue and Hazardous Waste List The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009. Council Directive 96/82/EC of 9 December 1996 on the control of major-accident hazards involving dangerous substances (Seveso II), with later amendments.
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15.2. Chemical safety assessment

Chemical safety assessment performed	Yes
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SECTION 16: Other information

Supplier's notes	The information contained in this SDS must be made available to all those who handle the product.
List of relevant H-phrases (Section 2 and 3)	EUH 066 Repeated exposure may cause skin dryness or cracking. H304 May be fatal if swallowed and enters airways.
Recommended restrictions on use	This product is intended for use in closed systems only.

	This product is not to be used as a solvent or cleaning agent; for lighting or brightening fires; as a skin cleanser.
Abbreviations and acronyms used	<p>ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road</p> <p>DNEL: Derived No Effect Level</p> <p>EWC: European Waste Code (a code from the EU's common classification system for waste)</p> <p>EL50: The effective concentration of substance (slightly soluble) that causes 50% of the maximum response.</p> <p>IATA: The International Air Transport Association</p> <p>ICAO: The International Civil Aviation Organisation</p> <p>IL50: Inhibitory level: concentration that inhibits a biological function by 50%.</p> <p>IMDG: The International Maritime Dangerous Goods Code</p> <p>LC50: Median concentration lethal to 50% of a test population.</p> <p>LD50: Lethal dose: dose that kills 50% of exposed organisms.</p> <p>LL50: Lethal level: loading rate that kills 50% of exposed organisms.</p> <p>PNEC: Predicted No Effect Concentration</p> <p>RID: The Regulations concerning the International Carriage of Dangerous Goods by Rail</p>
Information added, deleted or revised	Relevant changes compared to the previous version of the safety data sheet are indicated with verticle lines in the left margin.
Version	6
Prepared by	Ramboll Sweden AB