

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

1.1 Product identifier

Product name : HVO100
UFI : YU68-XKNT-EX1R-91TT

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

Identified uses
Formulation and packaging / reconditioning of substances and mixtures, Industrial Use as a fuel - Industrial Use as a fuel - Professional Use as a fuel - Consumer

1.3 Details of the supplier of the safety data sheet

TotalEnergies Additives and Fuels Solutions
Place du Bassin
69700 Givors
Tel: +33 (0) 4 72 49 27 00
rm.acs-fds@totalenergies.com

Contact

H.S.E

1.4 Emergency telephone number

National advisory body/Poison Center

Telephone number : France - ORFILA (INRS) Tél : +33 (0)1 45 42 59 59
In France - Poison centers:
ANGERS : 02 41 48 21 21
BORDEAUX : 05 56 96 40 80
LILLE : 08 00 59 59 59
LYON : 04 72 11 69 11
MARSEILLE : 04 91 75 25 25
NANCY : 03 83 22 50 50
PARIS : 01 40 05 48 48
STRASBOURG : 03 88 37 37 37
TOULOUSE : 05 61 77 74 47

Supplier

Telephone number : Emergency phone: +44 1235 239670

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Asp. Tox. 1, H304

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms

:



Signal word

: Danger

Hazard statements

: H304 - May be fatal if swallowed and enters airways.

Precautionary statements

Prevention

: Not applicable.

Response

: P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P331 - Do NOT induce vomiting.

Storage

: Not applicable.

Disposal

: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Contains

: Alkanes, C10-20-branched and linear
Renewable hydrocarbons, C15-C18, branched alkanes

Supplemental label elements

: Repeated exposure may cause skin dryness or cracking.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

: Not applicable.

2.3 Other hazards

This mixture does not contain any substances that are assessed to be a PBT or a vPvB in a concentration $\geq 0,1$ %.

Other hazards which do not result in classification

: Combustible liquid
Hazard of slipping on spilled product.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

: Mixture

Product/substance	Identifiers	% (w/w)	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Alkanes, C10-20-branched and linear	REACH #: 01-2119450077-42 EC: 618-882-6 CAS: 928771-01-1	0 - 100	Asp. Tox. 1, H304 EUH066	-	[1]
Renewable hydrocarbons, C15-C18, branched alkanes	REACH #: 01-2120107956-51 EC: 942-445-1 CAS: 90622-53-0*	0 - 100	Asp. Tox. 1, H304 See Section 16 for the full text of the H statements declared above.	-	[1]

Additional information : ☒ Contains: Additives
Contains: Mixture of C16-C18 fatty acids methyl esters
Component: % (v/v)

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

☒ Substance classified with a health or environmental hazard

The EC substance definition and related classification & labelling have been developed in the framework of the Regulation (EC) No 1907/2006 (REACH). The related CAS number* is used for the purpose of the international inventories present in section 15 of the SDS.

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : ☒ Take victim immediately to hospital. SYMPTOMS MAY NOT APPEAR IMMEDIATELY Wash out mouth with water. Keep person warm and at rest. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Loosen tight clothing such as a collar, tie, belt or waistband.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

Eye contact	: No specific data.
Inhalation	: No specific data.
Skin contact	: Adverse symptoms may include the following: irritation dryness cracking
Ingestion	: Adverse symptoms may include the following: nausea or vomiting

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	: Aspiration hazard if swallowed. In this case, the product may enter the lungs and lead to the rapid development of very serious pulmonary lesions that may appear in the following hours. Seek immediate medical attention. The exposed person may need to be kept under medical surveillance for 48 hours.
Specific treatments	: No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	: Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	:  Do not use a solid water stream as it may scatter and spread fire

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	: In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous combustion products	: Decomposition products may include the following materials: Carbon dioxide (CO ₂). carbon monoxide Ketone. Aldehyde.

5.3 Advice for firefighters

Special protective actions for fire-fighters	: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
Additional information	: Not considered to be a product presenting a risk of explosion.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 6.2 Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

- 6.4 Reference to other sections** : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds

Named substances

Name	Notification and MAPP threshold	Safety report threshold
Fuel - Category 34	2500 tonne	25000 tonne

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

Reportable hazardous constituent(s) contained in UVCB and/or multi-constituent substance(s) complying with the classification criteria and/or with an exposure limit (OEL)

No exposure limit value known.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Advisory OEL : No known significant effects or critical hazards.

DNELs/DMELs

Product/substance	Type	Exposure	Value	Population	Effects
Alkanes, C10-20-branched and linear	DNEL	Long term Dermal	42 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	147 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	18 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	94 mg/m ³	General population	Systemic
	DNEL	Long term Oral	18 mg/kg bw/day	General population	Systemic

PNECs

Product/ingredient name	Compartment Detail	Name	Method Detail
Alkanes, C10-20-branched and linear	Fresh water	0.01 mg/l	-
	Marine water	0.01 mg/l	-
	Fresh water sediment	3810 mg/kg dwt	-
	Marine water sediment	3.73 mg/kg dwt	-
	Soil	761 mg/kg dwt	-
	Sewage Treatment Plant	10 mg/l	-

8.2 Exposure controls

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Glove material: Nitrile rubber; Glove thickness > 0.5 mm; Break through time > 480 min; standard : EN 374
Glove material: Neoprene; Glove thickness > 0.75 mm; Break through time > 60 min; standard : EN 374
Glove material: polyvinyl chloride (PVC); Glove thickness > 1.3 mm; Break through time > 30 min; standard : EN 374

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. When using a mask or half mask : (vapor) Respirator with a vapor filter (EN 14387) Type A (aerosol) Respirator with combination filter for vapor/particulate Type A/P2 The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature (20°C / 68°F) and pressure (1013 hPa) unless otherwise indicated

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: Liquid.	
Color	: Colorless. to light yellow	
Odor	: Characteristic.	
Odor threshold	: Not available.	
pH	: Not applicable.	Product is non-soluble (in water).
Melting point/freezing point	: Not available.	
Initial boiling point and boiling range	: 160 to 320°C [ISO 3405]	
Flash point	: Closed cup: >60°C [ASTM D 93]	
Evaporation rate	: >1 (ether (anhydrous) = 1)	
Flammability	: The product may form flammable mixtures with air when heated above the flash point.	
Lower and upper explosion limit	: Not available.	
Vapor pressure	: <0.1 kPa	
Vapor density	: >1 [Air = 1]	
Relative density	: 0.77 to 0.795 [ISO 12185]	
Density	: 0.77 to 0.795 g/cm ³ [15°C] [ISO 12185]	
Solubility(ies)	:	

Media	Result
Water	Not soluble

Miscible with water	: No.
Partition coefficient: n-octanol/ water	: Not applicable.
Auto-ignition temperature	: >204°C
Decomposition temperature	: Not applicable.
Viscosity	: Kinematic (40°C): <7.5 mm ² /s [ISO 3104]

Particle characteristics

Median particle size	: Not applicable.
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9.2 Other information

Explosive properties	: Not considered to be a product presenting a risk of explosion.
Oxidizing properties	: This product is not considered oxidising based on chemical structure considerations

SECTION 10: Stability and reactivity

- 10.1 Reactivity** : ☒ None under normal use conditions
- 10.2 Chemical stability** : Stable under recommended storage and handling conditions (see Section 7).
- 10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- 10.4 Conditions to avoid** : Take precautionary measures against static discharges.
- 10.5 Incompatible materials** : Reactive or incompatible with the following materials:
Strong oxidizing agents
strong acids
Strong bases
- 10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity

Product/substance	Result	Species	Dose	Exposure	Test
☒ Alkanes, C10-20-branched and linear	LC50 Inhalation Vapor	Rat - Male	23.4 mg/l	8 hours	OECD 403
	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-	Read across EU B.3
	LD50 Oral	Rat - Female	>2000 mg/kg	-	EU B.1
	LD50 Dermal	Rat	>2000 mg/kg	-	OECD 402
Renewable hydrocarbons, C15-C18, branched alkanes	LD50 Oral	Rat	>2000 mg/kg	-	OECD 401

Conclusion/Summary : Based on available data, the classification criteria are not met.

Acute toxicity estimates

N/A

Irritation/Corrosion

Product/substance	Result	Species	Score	Exposure	Test
☒ Alkanes, C10-20-branched and linear	Eyes - Cornea opacity	Rabbit	0	-	EU B.5
	Skin - Edema	Rabbit	0.83	4 hours	EU B.4

Conclusion/Summary

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

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

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

Sensitization

Product/substance	Route of exposure	Species	Result
Alkanes, C10-20-branched and linear	skin	Guinea pig	Not sensitizing

Conclusion/Summary

:

Skin

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

Respiratory

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

Mutagenicity

Product/substance	Test	Experiment	Result
Alkanes, C10-20-branched and linear	EU B. 13/14	Experiment: In vitro Subject: Bacteria	Negative
	EU B.10	Experiment: In vitro Subject: Mammalian-Animal	Negative
	EU B.17	Experiment: In vitro Subject: Mammalian-Animal	Negative

Conclusion/Summary

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

Carcinogenicity
Conclusion/Summary

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

Reproductive toxicity

Product/substance	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
Alkanes, C10-20-branched and linear	Negative	Negative	Negative	Rat - Male, Female	Oral: 1000 mg/kg NOAEL	-

Conclusion/Summary

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

Teratogenicity

Product/substance	Result	Species	Dose	Exposure
Alkanes, C10-20-branched and linear	Negative - Oral	Rabbit - Female	1000 mg/kg NOAEL	21 days; 7 days per week
	Negative - Oral	Rat - Female	1000 mg/kg NOAEL	14 days; 7 days per week

Conclusion/Summary

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

Specific target organ toxicity (single exposure)
Conclusion/Summary

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

Specific target organ toxicity (repeated exposure)
Conclusion/Summary

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

Aspiration hazard

Product/substance	Result
Alkanes, C10-20-branched and linear	ASPIRATION HAZARD - Category 1
Renewable hydrocarbons, C15-C18, branched alkanes	ASPIRATION HAZARD - Category 1

Conclusion/Summary

: Based on available data, the classification criteria are met.

Information on the likely routes of exposure

: Not available.

Potential acute health effects

Eye contact	: No known significant effects or critical hazards.
Inhalation	: No known significant effects or critical hazards.
Skin contact	: Defatting to the skin. May cause skin dryness and irritation.
Ingestion	: May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: No specific data.
Inhalation	: No specific data.
Skin contact	: Adverse symptoms may include the following: irritation dryness cracking
Ingestion	: Adverse symptoms may include the following: nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects	: Not available.
Potential delayed effects	: Not available.

Long term exposure

Potential immediate effects	: Not available.
Potential delayed effects	: Not available.

Potential chronic health effects

Product/substance	Result	Species	Dose	Exposure
Alkanes, C10-20-branched and linear	Sub-chronic NOAEL Oral	Rat - Male, Female	1000 mg/kg	21 days; 7 days per week

Conclusion/Summary	: Not available.
General	: Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Reproductive toxicity	: No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

This product does not contain any substance present at a concentration equal to or greater than 0.1% by mass, included in the list drawn up in accordance with article 59, paragraph 1 of the REACH Regulation, due to its endocrine disrupting properties, or a substance known to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation 2018/605.

11.2.2 Other information

Not available

SECTION 12: Ecological information

12.1 Toxicity

Product/substance	Result	Species	Exposure	Test
Alkanes, C10-20-branched and linear Renewable hydrocarbons, C15-C18, branched alkanes	Acute EC50 >100 mg/l	Algae - Scenedesmus subspicatus	72 hours	OECD 201
	Acute EC50 >100 mg/l	Daphnia - Daphnia magna	48 hours	OECD 202
	Acute EC50 >1000 mg/l	Micro-organism	30 minutes	OECD 209
	Acute LC50 >1000 mg/l	Fish - Oncorhynchus mykiss	96 hours	OECD 203
	Chronic NOEL 1 mg/l	Daphnia - Daphnia magna	21 days	OECD 211
	Acute EC50 3201 mg/l	Algae - Skeletonema costatum	72 hours	ISO 10253
	Acute EC50 42001 mg/l	Daphnia - Acartia tonsa	48 hours	ISO TC147/SC5/WG2
	Acute LC50 1029 mg/l	Fish	96 hours	-
	Acute NOELR 993 mg/l	Algae - Skeletonema costatum	72 hours	ISO 10253
	Chronic NOELR 1001 mg/l	Daphnia - Daphnia Magna	21 days	-
	Chronic NOELR >1000 mg/l	Fish - Oncorhynchus mykiss	28 days	-

12.2 Persistence and degradability

Product/substance	Test	Result	Dose	Inoculum
Alkanes, C10-20-branched and linear Renewable hydrocarbons, C15-C18, branched alkanes	OECD 301B	82 % - Readily - 28 days	-	Activated sludge
	OECD 306	83 % - Readily - 28 days	-	-

Conclusion/Summary : Not available.

Product/substance	Aquatic half-life	Photolysis	Biodegradability
Alkanes, C10-20-branched and linear Renewable hydrocarbons, C15-C18, branched alkanes	-	-	Readily
	-	-	Readily

12.3 Bioaccumulative potential

Product/substance	LogK _{ow}	BCF	Potential
Alkanes, C10-20-branched and linear	>6.5	3 to 2000	high

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : The product spreads on the surface of the water. May exhibit slight solubility in water

Mobility in soil : Given its physical and chemical characteristics, the product is generally mobile in the ground. It may contaminate ground water. The product spreads on the surface of the water.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB in a concentration $\geq 0,1 \%$.

12.6 Endocrine disrupting properties

This product does not contain any substance present at a concentration equal to or greater than 0.1% by mass, included in the list drawn up in accordance with article 59, paragraph 1 of the REACH Regulation, due to its endocrine disrupting properties, or a substance known to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation 2018/605.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	ICAO/IATA
14.1 UN number or ID number	UN1202	UN1202	Not regulated.	Not regulated.
14.2 UN proper shipping name	DIESEL FUEL	DIESEL FUEL	-	-
14.3 Transport hazard class(es)	3 	3 	-	-
14.4 Packing group	III	III	-	-
14.5 Environmental hazards	No.	No.	No.	No.

Additional information

ADR/RID : Hazard identification number 30
Limited quantity 5 L
Special provisions 640M, 664
Tunnel code (D/E)

ADN : Special provisions 640M

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Maritime transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions : Not applicable.
on the manufacture,
placing on the market
and use of certain
dangerous substances,
mixtures and articles

Other EU regulations

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Industrial emissions : Not listed
(integrated pollution
prevention and control) -
Air

Industrial emissions : Not listed
(integrated pollution
prevention and control) -
Water

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Named substances

Name

Fuel - Category 34

National regulations

- Social Security Code, Articles L 461-1 to L 461-7** : Alkanes, C10-20-branched and linear RG 84
- Classified installations for environmental protection** : Environmental Code, Book V Prevention of Pollution, Risks and Nuisance, Title I: Classified Installations for Environmental Protection, Chapter 1 General Provisions; Section 2: Nomenclature of Classified Installations (Article R511-9 to R511-10): 4734
- Reinforced medical surveillance** : Decree n ° 2012-135 of January 30, 2012 relating to the organization of occupational medicine: not applicable
- Other regulations** : Decree of July 1st 2004 concerning technical and safety rules for the storage of petroleum product in collective or individual

International regulations
Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

LU - Luxembourg prohibited chemicals in the workplace

Not listed.

Inventory list

- | | |
|--|--|
| Australia inventory (AIIC) | : All components are listed or exempted. |
| Canada inventory (DSL/NDL) | : All components are listed or exempted. |
| China inventory (IECSC) | : Not determined. |
| Europe inventory (EC) | : All components are listed or exempted. |
| Japan inventory | : Japan inventory (CSCL) : At least one component is not listed.
Japan inventory (ISHL) : Not determined. |
| New Zealand Inventory of Chemicals (NZIoC) | : Not determined. |
| Philippines inventory (PICCS) | : Not determined. |
| Korea inventory (KECI) | : Not determined. |
| Taiwan Chemical Substances Inventory (TCSI) | : Not determined. |

Thailand inventory	: Not determined.
Turkey inventory	: Not determined.
United States inventory (TSCA 8b)	: All components are listed or exempted.
Vietnam inventory	: Not determined.

The information stated in this section relates solely to the conformity of the chemical product with the countries Inventories. The information used to confirm the inventory status of this product may be based on additional data to the chemical composition shown in Section 3. Other regulations may apply for importation or marketing authorizations.

15.2 Chemical Safety Assessment : See Annex to the Safety data sheet for additional information in the Exposure Scenario(s).

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms	ATE = Acute Toxicity Estimate CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] DNEL = Derived No Effect Level DMEL = Derived Minimal Effect Level EUH statement = CLP-specific Hazard statement N/A = Not available PBT = Persistent, Bioaccumulative and Toxic vPvB = Very Persistent and Very Bioaccumulative PNEC = Predicted No Effect Concentration LC50 = Median lethal concentration LD50 = Median lethal dose OEL = Occupational Exposure Limit VOC = Volatile Organic Compound UVCB Substance of unknown or Variable composition, Complex reaction products or Biological material NOEC No Observed Effect Concentration QSAR = Quantitative Structure–Activity Relationship
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Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Asp. Tox. 1, H304	Calculation method

Full text of abbreviated H statements

H304 EUH066	May be fatal if swallowed and enters airways. Repeated exposure may cause skin dryness or cracking.
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Full text of classifications [CLP/GHS]

Asp. Tox. 1	ASPIRATION HAZARD - Category 1
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Date of revision : 2022/08/26
Date of previous revision : 2022/04/20
Version : 2

Notice to reader



TotalEnergies

HVO100

SDS # : C39JDCOLK

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : C39JDCOLK
Product name : HVO100

Section 1 - Title

Short title of the exposure scenario : Formulation and packaging / reconditioning of substances and mixtures, Industrial

List of use descriptors : **Identified use name:** Formulation and packaging / reconditioning of substances and mixtures, Industrial
Process Category: PROC01, PROC02, PROC03, PROC05, PROC08a, PROC08b, PROC09, PROC15
Substance supplied to that use in form of: In a mixture
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02

Environmental contributing scenarios :

Health Contributing scenarios : Formulation, dilution and mixing
Batch processes at elevated temperatures
Process sampling
Laboratory activities
Material transfers
Mixing operations (open systems)
Pouring from small containers
Transfer from/pouring from containers
Drum and small package filling
Equipment cleaning and maintenance
Storage
General measures applicable to all activities

Processes and activities covered by the exposure scenario	: Formulation, packing and re-packing of the substance and its mixtures in batch operations, including storage, materials transfers, mixing, large and small scale packing, maintenance and associated laboratory activities.
Additional information	: ESVOC SpERC 2.2.v1.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1:	
Amounts used	: Fraction of EU tonnage used in region: 1 Annual site tonnage (tonnes/year): $\leq 1.5E+6$ t Maximum daily site tonnage (kg/day): ≤ 100 t
Frequency and duration of use	: Emission days (days per year): 300
Environment factors not influenced by risk management	: Local freshwater dilution factor: 10 Local marine water dilution factor: 100
Other conditions affecting environmental exposure	: Release fraction to air from process (initial release prior to RMM): 0.25 % Release fraction to wastewater from process (initial release prior to RMM): 0.005 % Release fraction to soil from process (initial release prior to RMM): 0.01 %
Conditions and measures related to sewage treatment plant	: 2000 m ³ /d (standard town)

HVO100		Formulation and packaging / reconditioning of substances and mixtures, Industrial
Conditions and measures related to external treatment of waste for disposal	:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	:	External recovery and recycling of waste should comply with applicable local and/or national regulations.
Contributing scenario controlling worker exposure for 2: Formulation, dilution and mixing		
No specific measures identified.		
Conditions and measures related to personal protection, hygiene and health evaluation		
Contributing scenario controlling worker exposure for 3: Batch processes at elevated temperatures		
No specific measures identified.		
Conditions and measures related to personal protection, hygiene and health evaluation		
Contributing scenario controlling worker exposure for 4: Process sampling		
Conditions and measures related to personal protection, hygiene and health evaluation		
Personal protection	:	Wear suitable gloves tested to EN374.
Contributing scenario controlling worker exposure for 5: Laboratory activities		
Ventilation control measures	:	Provide enhanced general ventilation by mechanical means.
Conditions and measures related to personal protection, hygiene and health evaluation		
Advice on general occupational hygiene	:	Wear suitable gloves tested to EN374.
Respiratory protection	:	Use a receptor hood for fumes/vapours.
Contributing scenario controlling worker exposure for 6: Material transfers		
No specific measures identified.		
Conditions and measures related to personal protection, hygiene and health evaluation		
Contributing scenario controlling worker exposure for 7: Mixing operations (open systems)		
Conditions and measures related to personal protection, hygiene and health evaluation		
Advice on general occupational hygiene	:	Wear suitable gloves tested to EN374.
Contributing scenario controlling worker exposure for 8: Pouring from small containers		
Conditions and measures related to personal protection, hygiene and health evaluation		
Advice on general occupational hygiene	:	Wear suitable gloves tested to EN374.
Contributing scenario controlling worker exposure for 9: Transfer from/pouring from containers		
No specific measures identified.		
Conditions and measures related to personal protection, hygiene and health evaluation		
Contributing scenario controlling worker exposure for 10: Drum and small package filling		
Technical conditions and measures at process level (source) to prevent release	:	Fill containers/cans at dedicated fill points supplied with local extract ventilation.
Conditions and measures related to personal protection, hygiene and health evaluation		

Contributing scenario controlling worker exposure for 11: Equipment cleaning and maintenance

Technical conditions and measures at process level (source) to prevent release : Drain down system prior to equipment break-in or maintenance.

Ventilation control measures : Provide enhanced general ventilation by mechanical means.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Wear suitable gloves tested to EN374.

Contributing scenario controlling worker exposure for 12: Storage

No specific measures identified.

Conditions and measures related to personal protection, hygiene and health evaluation**Contributing scenario controlling worker exposure for 13: General measures applicable to all activities**

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : Liquid

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently).

Human factors not influenced by risk management : Palm of one hand (240 cm²), Palm of both hands (480 cm²), Both hands (960 cm²).

Other conditions affecting workers exposure : Indoor. Assumes use at not more than 20°C above ambient temperature, unless stated differently. Assumes use with typical ventilation.

Conditions and measures related to personal protection, hygiene and health evaluation**Section 3 - Exposure estimation and reference to its source**

Website: : Not applicable.

Exposure estimation and reference to its source - Environment: 1:

Exposure assessment (environment): : The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 2: Formulation, dilution and mixing

Exposure assessment (human): : Used CHESAR model.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 3: Batch processes at elevated temperatures

Exposure assessment (human): : Used CHESAR model.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 4: Process sampling

Exposure assessment (human): : Used CHESAR model.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 5: Laboratory activities

Exposure assessment (human): : Used CHESAR model.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 6: Material transfers

Exposure assessment (human): : Used CHESAR model.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 7: Mixing operations (open systems)

Exposure assessment (human): : Used CHESAR model.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 8: Pouring from small containers

Exposure assessment (human): : Used CHESAR model.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 9: Transfer from/pouring from containers

Exposure assessment (human): : Used CHESAR model.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 10: Drum and small package filling

Exposure assessment (human): : Used CHESAR model.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 11: Equipment cleaning and maintenance

Exposure assessment (human): : Used CHESAR model.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 12: Storage

Exposure assessment (human): : Used CHESAR model.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 13: General measures applicable to all activities

Exposure assessment (human): : Used CHESAR model.

Exposure estimation and reference to its source : Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : No information available.

Health : No information available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.**Health** : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : C39JDCOLK
Product name : HVO100

Section 1 - Title

Short title of the exposure scenario : Use as a fuel - Industrial

List of use descriptors : **Identified use name:** Use as a fuel - Industrial
Process Category: PROC01, PROC02, PROC03, PROC04, PROC08a, PROC08b, PROC15, PROC16
Substance supplied to that use in form of: As such
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC07

Environmental contributing scenarios : **ESVOC SPERC 7.12a.v1**

Health Contributing scenarios : **Transfer from/pouring from containers**
General exposures (closed systems) Use in contained batch processes
General exposures (open systems)
Process sampling
Equipment cleaning and maintenance
Vessel and container cleaning
Storage
Refuelling
Laboratory activities
General measures applicable to all activities
General exposures (closed system) | Continuous process
General exposures (closed system) | Continuous process | Process sampling
Material transfers – PROC 4
Material transfers – PROC 8b

Processes and activities covered by the exposure scenario	: Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.
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Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: ESVOC SPERC 7.12a.v1	
Amounts used	: Fraction of EU tonnage used in region: 1 Annual site tonnage (tonnes/year): <= 10000 t Maximum daily site tonnage (kg/day): <= 5000 t
Frequency and duration of use	: Emission days (days per year): 300
Environment factors not influenced by risk management	: Local freshwater dilution factor: 10 Local marine water dilution factor: 100
Other conditions affecting environmental exposure	: Release fraction to air from process (initial release prior to RMM): 0.025 % Release fraction to wastewater from process (initial release prior to RMM): 0.001 % Release fraction to soil from process (initial release prior to RMM): 0 %
Conditions and measures related to sewage treatment plant	: 2000 m³/d (standard town)

Conditions and measures related to external treatment of waste for disposal	: External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	: External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenario controlling worker exposure for 2: Transfer from/pouring from containers

Other conditions affecting workers exposure	: Use drum pumps or carefully pour from container.
Ventilation control measures	: Provide enhanced general ventilation by mechanical means.
Conditions and measures related to personal protection, hygiene and health evaluation	
Advice on general occupational hygiene	: Wear suitable gloves tested to EN374.

Contributing scenario controlling worker exposure for 3: General exposures (closed systems) Use in contained batch processes

Organizational measures to prevent/limit releases, dispersion and exposure	: Ensure material transfers are under containment or extract ventilation.
Conditions and measures related to personal protection, hygiene and health evaluation	

Contributing scenario controlling worker exposure for 4: General exposures (open systems)

Organizational measures to prevent/limit releases, dispersion and exposure	: Ensure material transfers are under containment or extract ventilation.
Conditions and measures related to personal protection, hygiene and health evaluation	

Contributing scenario controlling worker exposure for 5: Process sampling

Conditions and measures related to personal protection, hygiene and health evaluation	
Advice on general occupational hygiene	: Wear suitable gloves tested to EN374.

Contributing scenario controlling worker exposure for 6: Equipment cleaning and maintenance

Engineering controls	: Drain down system prior to equipment break-in or maintenance.
Ventilation control measures	: Provide enhanced general ventilation by mechanical means.
Conditions and measures related to personal protection, hygiene and health evaluation	
Advice on general occupational hygiene	: Wear suitable gloves tested to EN374.

Contributing scenario controlling worker exposure for 7: Vessel and container cleaning

Engineering controls	: Drain down system prior to equipment break-in or maintenance.
Ventilation control measures	: Provide enhanced general ventilation by mechanical means.
Conditions and measures related to personal protection, hygiene and health evaluation	
Advice on general occupational hygiene	: Wear suitable gloves (tested to EN374), coverall and eye protection.
Personal protection	: Wear a self-contained breathing apparatus and chemical protective clothing

Contributing scenario controlling worker exposure for 8: Storage

No specific measures identified.	
Conditions and measures related to personal protection, hygiene and health evaluation	

Contributing scenario controlling worker exposure for 9: Refuelling

Technical conditions and measures to control dispersion from source towards the worker : Use drum pumps or carefully pour from container.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Wear suitable gloves tested to EN374.

Contributing scenario controlling worker exposure for 10: Laboratory activities

Ventilation control measures : Provide extract ventilation to points where emissions occur.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Wear suitable gloves tested to EN374.

Contributing scenario controlling worker exposure for 11: General measures applicable to all activities

Concentration of substance in mixture or article : Covers percentage substance in the product up to 100% (unless stated differently).

Physical state : Liquid

Frequency and duration of use/exposure : Covers daily exposures up to 8 hours (unless stated differently).

Human factors not influenced by risk management : Palm of one hand (240 cm²), Palm of both hands (480 cm²), Both hands (960 cm²).

Other conditions affecting workers exposure : Indoor. Assumes use at not more than 20°C above ambient temperature, unless stated differently. Assumes use with typical ventilation.

Conditions and measures related to personal protection, hygiene and health evaluation**Contributing scenario controlling worker exposure for 12: General exposures (closed system) | Continuous process**

No specific measures identified.

Conditions and measures related to personal protection, hygiene and health evaluation**Contributing scenario controlling worker exposure for 13: General exposures (closed system) | Continuous process | Process sampling**

Ventilation control measures : Ensure samples are obtained under containment or extract ventilation.

Conditions and measures related to personal protection, hygiene and health evaluation**Contributing scenario controlling worker exposure for 14: Material transfers – PROC 4****Conditions and measures related to personal protection, hygiene and health evaluation**

Advice on general occupational hygiene : Wear suitable gloves tested to EN374.

Contributing scenario controlling worker exposure for 15: Material transfers – PROC 8b

Organizational measures to prevent/limit releases, dispersion and exposure : Use drum pumps or carefully pour from container.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Wear suitable gloves tested to EN374.

Section 3 - Exposure estimation and reference to its source

Website:		: Not applicable.
Exposure estimation and reference to its source - Environment: 1: ESVOC SPERC 7.12a.v1		
Exposure assessment (environment):	:	The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model
Exposure estimation and reference to its source	:	Not available.
Exposure estimation and reference to its source - Workers: 2: Transfer from/pouring from containers		
Exposure assessment (human):	:	Used CHESAR model.
Exposure estimation and reference to its source	:	Not available.
Exposure estimation and reference to its source - Workers: 3: General exposures (closed systems) Use in contained batch processes		
Exposure assessment (human):	:	Used CHESAR model.
Exposure estimation and reference to its source	:	Not available.
Exposure estimation and reference to its source - Workers: 4: General exposures (open systems)		
Exposure assessment (human):	:	Used CHESAR model.
Exposure estimation and reference to its source	:	Not available.
Exposure estimation and reference to its source - Workers: 5: Process sampling		
Exposure assessment (human):	:	Used CHESAR model.
Exposure estimation and reference to its source	:	Not available.
Exposure estimation and reference to its source - Workers: 6: Equipment cleaning and maintenance		
Exposure assessment (human):	:	Used CHESAR model.
Exposure estimation and reference to its source	:	Not available.
Exposure estimation and reference to its source - Workers: 7: Vessel and container cleaning		
Exposure assessment (human):	:	Used CHESAR model.
Exposure estimation and reference to its source	:	Not available.
Exposure estimation and reference to its source - Workers: 8: Storage		
Exposure assessment (human):	:	Used CHESAR model.
Exposure estimation and reference to its source	:	Not available.
Exposure estimation and reference to its source - Workers: 9: Refuelling		
Exposure assessment (human):	:	Used CHESAR model.
Exposure estimation and reference to its source	:	Not available.

Exposure estimation and reference to its source - Workers: 10: Laboratory activities

Exposure assessment (human): : Used CHESAR model.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 11: General measures applicable to all activities

Exposure assessment (human): : Used CHESAR model.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 12: General exposures (closed system) | Continuous process

Exposure assessment (human): : Used CHESAR model.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 13: General exposures (closed system) | Continuous process | Process sampling

Exposure assessment (human): : Used CHESAR model.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 14: Material transfers – PROC 4

Exposure assessment (human): : Used CHESAR model.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 15: Material transfers – PROC 8b

Exposure assessment (human): : Used CHESAR model.

Exposure estimation and reference to its source : Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : No information available.

Health : No information available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : C39JDCOLK
Product name : HVO100

Section 1 - Title

Short title of the exposure scenario : Use as a fuel - Professional

List of use descriptors : **Identified use name:** Use as a fuel - Professional
Process Category: PROC01, PROC02, PROC03, PROC08a, PROC08b, PROC16
Substance supplied to that use in form of: As such
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC09a, ERC09b

Environmental contributing scenarios : **ESVOC SPERC 9.12b.v1**

Health Contributing scenarios : **Transfer from/pouring from containers**
Refuelling
Dipping, immersion and pouring
General exposures (open systems)
General exposures (closed systems)
Equipment cleaning and maintenance
Vessel and container cleaning
Storage
General measures applicable to all activities
Material transfers | Product delivery/storage

Processes and activities covered by the exposure scenario : Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: ESVOC SPERC 9.12b.v1

Amounts used : Fraction of EU tonnage used in region: 0.1
Maximum daily site tonnage (kg/day): <= 160 kg

Frequency and duration of use : Emission days (days per year): 365

Environment factors not influenced by risk management : Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Other conditions affecting environmental exposure : Release fraction to air from process (initial release prior to RMM): 0.01%
Release fraction to wastewater from process (initial release prior to RMM): 0.001%
Release fraction to soil from process (initial release prior to RMM): 0.001%

Conditions and measures related to sewage treatment plant : 2000 m³/d (standard town)

Conditions and measures related to external treatment of waste for disposal : External treatment and disposal of waste should comply with applicable local and/or national regulations.

Conditions and measures related to external recovery of waste : External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenario controlling worker exposure for 2: Transfer from/pouring from containers

Ventilation control measures : Provide enhanced general ventilation by mechanical means.

Organizational measures to prevent/limit releases, dispersion and exposure : Use drum pumps or carefully pour from container.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Wear suitable gloves tested to EN374.

Contributing scenario controlling worker exposure for 3: Refuelling

Ventilation control measures : Provide enhanced general ventilation by mechanical means.

Organizational measures to prevent/limit releases, dispersion and exposure : Use drum pumps or carefully pour from container.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Wear suitable gloves tested to EN374.

Contributing scenario controlling worker exposure for 4: Dipping, immersion and pouring**Conditions and measures related to personal protection, hygiene and health evaluation**

Advice on general occupational hygiene : Wear suitable gloves tested to EN374.

Contributing scenario controlling worker exposure for 5: General exposures (open systems)

No specific measures identified.

Conditions and measures related to personal protection, hygiene and health evaluation**Contributing scenario controlling worker exposure for 6: General exposures (closed systems)**

No specific measures identified.

Conditions and measures related to personal protection, hygiene and health evaluation**Contributing scenario controlling worker exposure for 7: Equipment cleaning and maintenance**

Engineering controls : Drain down system prior to equipment break-in or maintenance.

Ventilation control measures : Provide enhanced general ventilation by mechanical means.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Wear suitable gloves tested to EN374.

Contributing scenario controlling worker exposure for 8: Vessel and container cleaning

Engineering controls : Drain down system prior to equipment break-in or maintenance.

Ventilation control measures : Provide enhanced general ventilation by mechanical means.

Conditions and measures related to personal protection, hygiene and health evaluation

Advice on general occupational hygiene : Wear suitable gloves tested to EN374.

Contributing scenario controlling worker exposure for 9: Storage

No specific measures identified.

Conditions and measures related to personal protection, hygiene and health evaluation

Contributing scenario controlling worker exposure for 10: General measures applicable to all activities

Product characteristics	: Liquid
Concentration of substance in mixture or article	: Covers percentage substance in the product up to 100% (unless stated differently).
Frequency and duration of use/exposure	: Covers daily exposures up to 8 hours (unless stated differently).
Human factors not influenced by risk management	: Palm of one hand (240 cm ²), Palm of both hands (480 cm ²), Both hands (960 cm ²).
Other conditions affecting workers exposure	: Indoor. Assumes use at not more than 20°C above ambient temperature, unless stated differently. Assumes use with typical ventilation.
Conditions and measures related to personal protection, hygiene and health evaluation	

Contributing scenario controlling worker exposure for 11: Material transfers | Product delivery/storage

Other conditions affecting workers exposure	: Handle substance within a closed system.
Ventilation control measures	: Provide enhanced general ventilation by mechanical means.
Conditions and measures related to personal protection, hygiene and health evaluation	
Advice on general occupational hygiene	: Wear suitable gloves tested to EN374.

Section 3 - Exposure estimation and reference to its source

Website:	: Not applicable.
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Exposure estimation and reference to its source - Environment: 1: ESVOC SPERC 9.12b.v1

Exposure assessment (environment):	: The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.
Exposure estimation and reference to its source	: Not available.

Exposure estimation and reference to its source - Workers: 2: Transfer from/pouring from containers

Exposure assessment (human):	: Used CHESAR model.
Exposure estimation and reference to its source	: Not available.

Exposure estimation and reference to its source - Workers: 3: Refuelling

Exposure assessment (human):	: Used CHESAR model.
Exposure estimation and reference to its source	: Not available.

Exposure estimation and reference to its source - Workers: 4: Dipping, immersion and pouring

Exposure assessment (human):	: Used CHESAR model.
Exposure estimation and reference to its source	: Not available.

Exposure estimation and reference to its source - Workers: 5: General exposures (open systems)

Exposure assessment (human):	: Used CHESAR model.
Exposure estimation and reference to its source	: Not available.

Exposure estimation and reference to its source - Workers: 6: General exposures (closed systems)

Exposure assessment (human): : Used CHESAR model.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 7: Equipment cleaning and maintenance

Exposure assessment (human): : Used CHESAR model.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 8: Vessel and container cleaning

Exposure assessment (human): : Used CHESAR model.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 9: Storage

Exposure assessment (human): : Used CHESAR model.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 10: General measures applicable to all activities

Exposure assessment (human): : Used CHESAR model.

Exposure estimation and reference to its source : Not available.

Exposure estimation and reference to its source - Workers: 11: Material transfers | Product delivery/storage

Exposure assessment (human): : Used CHESAR model.

Exposure estimation and reference to its source : Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment : No information available.

Health : No information available.

Additional good practice advice beyond the REACH CSA

Environment : Not available.

Health : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Consumer

Identification of the substance or mixture

Product definition : Mixture
Code : C39JDCOLK
Product name : HVO100

Section 1 - Title

Short title of the exposure scenario : Use as a fuel - Consumer

List of use descriptors : **Identified use name:** Use as a fuel - Consumer
Substance supplied to that use in form of: As such
Sector of end use: SU21
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC09a, ERC09b
Market sector by type of chemical product: PC13

Environmental contributing scenarios : **ESVOC SPERC 9.12c.v1**

Health Contributing scenarios : **Fuels Liquid: automotive refuelling**
Fuels Liquid: scooter refuelling
Fuels Liquid: garden equipment - use
Fuels Liquid: garden equipment - refuelling
Fuels Liquid: lamp oil
Fuels
Liquid: refuelling of boats
General measures applicable to all activities

Processes and activities covered by the exposure scenario	: Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.
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Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1: ESVOC SPERC 9.12c.v1	
Amounts used	: Fraction of EU tonnage used in region: 0.1 Maximum daily site tonnageMaximum daily site tonnage (kg/day): <= 550 kg
Frequency and duration of use	: Emission days (days per year): 365
Environment factors not influenced by risk management	: Local freshwater dilution factor: 10 Local marine water dilution factor: 100
Other conditions affecting environmental exposure	: Release fraction to air from process (initial release prior to RMM): 0.01% Release fraction to wastewater from process (initial release prior to RMM): 0.001% Release fraction to soil from process (initial release prior to RMM): 0.001%
Conditions and measures related to sewage treatment plant	: 2000 m³/d (standard town)
Conditions and measures related to external treatment of waste for disposal	: External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	: External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenario controlling consumer exposure for 2: Fuels Liquid: automotive refuelling**Amounts used** : For each use event, covers use amounts up to (g): 38.6 kg**Frequency and duration of use/exposure** : Covers exposure up to (hours per event): 0.05**Conditions and measures related to personal protection and hygiene****Contributing scenario controlling consumer exposure for 3: Fuels Liquid: scooter refuelling****Amounts used** : For each use event, covers use amounts up to (g): 7.5 kg**Frequency and duration of use/exposure** : Covers exposure up to (hours per event): 0.02**Conditions and measures related to personal protection and hygiene****Contributing scenario controlling consumer exposure for 4: Fuels Liquid: garden equipment - use****Amounts used** : For each use event, covers use amounts up to (g): 772 g**Frequency and duration of use/exposure** : Covers exposure up to (hours per event): 2**Conditions and measures related to personal protection and hygiene****Contributing scenario controlling consumer exposure for 5: Fuels Liquid: garden equipment - refuelling****Amounts used** : For each use event, covers use amounts up to (g): 772 g**Frequency and duration of use/exposure** : Covers exposure up to (hours per event): 0.03**Conditions and measures related to personal protection and hygiene****Contributing scenario controlling consumer exposure for 6: Fuels Liquid: lamp oil****Amounts used** : For each use event, covers use amounts up to (g): 100 g**Frequency and duration of use/exposure** : Covers exposure up to (hours per event): 0.01**Conditions and measures related to personal protection and hygiene****Contributing scenario controlling consumer exposure for 7: Fuels****Amounts used** : For each use event, covers use amounts up to (g): 3.32 kg**Frequency and duration of use/exposure** : Covers exposure up to (hours per event): 0.1**Conditions and measures related to personal protection and hygiene****Contributing scenario controlling consumer exposure for 8: Liquid: refuelling of boats****Amounts used** : For each use event, covers use amounts up to (g): 156 kg**Frequency and duration of use/exposure** : Covers exposure up to (hours per event): 0.25**Conditions and measures related to personal protection and hygiene****Contributing scenario controlling consumer exposure for 9: General measures applicable to all activities****Concentration of substance in mixture or article** : Covers percentage substance in the product up to 100% (unless stated differently).**Physical state** : Liquid.**Amounts used** : Covers use up to 156 kg.**Frequency and duration of use/exposure** : Covers use up to (times per day): 1**Human factors not influenced by risk management** : Palm of one hand (240 cm²), Palm of both hands (480 cm²), Both hands (960 cm²).**Other given operational conditions affecting consumers exposure** : Outdoor. Assumes use with typical ventilation. Avoid contact with skin.**Conditions and measures related to personal protection and hygiene**

Section 3 - Exposure estimation and reference to its source

Website:	: Not applicable.
Exposure estimation and reference to its source - Environment: 1: ESVOC SPERC 9.12c.v1	
Exposure assessment (environment):	: The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model.
Exposure estimation and reference to its source	: Not available.
Exposure estimation and reference to its source - Consumers: 2: Fuels Liquid: automotive refuelling	
Exposure assessment (human):	: Used CHESAR model.
Exposure estimation and reference to its source	: Not available.
Exposure estimation and reference to its source - Consumers: 3: Fuels Liquid: scooter refuelling	
Exposure assessment (human):	: Used CHESAR model.
Exposure estimation and reference to its source	: Not available.
Exposure estimation and reference to its source - Consumers: 4: Fuels Liquid: garden equipment - use	
Exposure assessment (human):	: Used CHESAR model.
Exposure estimation and reference to its source	: Not available.
Exposure estimation and reference to its source - Consumers: 5: Fuels Liquid: garden equipment - refuelling	
Exposure assessment (human):	: Used CHESAR model.
Exposure estimation and reference to its source	: Not available.
Exposure estimation and reference to its source - Consumers: 6: Fuels Liquid: lamp oil	
Exposure assessment (human):	: Used CHESAR model.
Exposure estimation and reference to its source	: Not available.
Exposure estimation and reference to its source - Consumers: 7: Fuels	
Exposure assessment (human):	: Used CHESAR model.
Exposure estimation and reference to its source	: Not available.
Exposure estimation and reference to its source - Consumers: 8: Liquid: refuelling of boats	
Exposure assessment (human):	: Used CHESAR model.
Exposure estimation and reference to its source	: Not available.
Exposure estimation and reference to its source - Consumers: 9: General measures applicable to all activities	
Exposure assessment (human):	: Used CHESAR model.
Exposure estimation and reference to its source	: Not available.

Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES

Environment	: No information available.
Health	: Not available.

Additional good practice advice beyond the REACH CSA

Environment	: No information available.
Health	: Not available.