



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.12.2023

Version number 1.0

Revision: 08.12.2023

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

1.1 Product identifier

Trade name: Renewablaze LPC4 R100

Article number: 2017927, 2017928, 2018003

Registration number All components are EU REACH Compliant or exempt.

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

Identified uses Use as a Fuel - Industrial
Use as a Fuel - Professional

Uses advised against Use only for intended applications

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: Haltermann Carless UK Ltd
Cedar Court, Guildford Road, Leatherhead, Surrey,
KT22 9RX
United Kingdom
+44(0)1372 360000
msdsteam@h-c-s-group.com

Haltermann Carless France S.A.S.
Zone d'Activites de la Baudriere no 1
27520 BOURGTHEROULDE - INFREVILLE
FRANCE
+33(0)232131450
FDS@h-c-s-group.com

Informing department: Product Stewardship

1.4 Emergency telephone number: CHEMTREC +1-703-527-3887 / +44 20 3885 0382 (EMEA) / +44 20 3807 3798 (UK)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flam. Liq. 1	H224	Extremely flammable liquid and vapour.
Skin Irrit. 2	H315	Causes skin irritation.
Muta. 1B	H340	May cause genetic defects.
Carc. 1B	H350	May cause cancer.
Repr. 2	H361d	Suspected of damaging the unborn child.
STOT SE 3	H336	May cause drowsiness or dizziness.

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.12.2023

Version number 1.0

Revision: 08.12.2023

Trade name: Renewablaze LPC4 R100

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

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling according to

Regulation (EC) No 1272/2008

Hazard pictograms

The product is classified and labelled according to the CLP regulation.



GHS02

GHS07

GHS08

GHS09

Signal word

Danger

Hazard-determining components

of labelling:

Renewable hydrocarbons (naphtha type fraction) obtained from the catalytic transformation of ethanol.

propane, 2-ethoxy-2-methyl-

Hazard statements

H224 Extremely flammable liquid and vapour.

H315 Causes skin irritation.

H340 May cause genetic defects.

H350 May cause cancer.

H361d Suspected of damaging the unborn child.

H336 May cause drowsiness or dizziness.

H304 May be fatal if swallowed and enters airways.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P241 Use explosion-proof [electrical/ventilating/lighting] equipment.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P321 Specific treatment (see on this label).

P331 Do NOT induce vomiting.

P362+P364 Take off contaminated clothing and wash it before reuse.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/ international regulations.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT:

Not applicable.



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.12.2023

Version number 1.0

Revision: 08.12.2023

Trade name: Renewablaze LPC4 R100

vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description: Mixture consisting of the following components.**Dangerous components:**

EC N°: 701-193-0 Renewable hydrocarbons (naphtha type fraction) obtained from the catalytic transformation of ethanol. $\geq 40 - \leq 80\%$
Reg.nr.: 01-2120790169-43

Flam. Liq. 1, H224; Muta. 1B, H340; Carc. 1B, H350; Repr. 2, H361d; Asp. Tox. 1, H304;
Aquatic Chronic 2, H411; Skin Irrit. 2, H315; STOT SE 3, H336

CAS: 637-92-3 propane, 2-ethoxy-2-methyl- $\geq 10 - \leq 30\%$
EINECS: 211-309-7 Flam. Liq. 2, H225; STOT SE 3, H336
Reg.nr.: 01-2119452785-29

CAS: 1634-04-4 tert-butyl methyl ether $\geq 10 - \leq 30\%$
EINECS: 216-653-1 Flam. Liq. 2, H225; Skin Irrit. 2, H315
Reg.nr.: 01-2119452786-27

Additional information

100% of the components are made from advanced sustainable sources
The EC substance definition and the resulting classification and labelling have been developed under Regulation (EC) No 1907/2006 (REACH). Information on the CAS number can be found in section 15 of this safety data sheet.
For substances with a TLV-value see section 8.
For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Instantly remove any clothing soiled by the product.
Take affected persons into the open air.
Take affected persons out of danger area and instruct to lie down.
Keep warm, position comfortably and cover well.

After inhalation

In case of unconsciousness bring patient into stable side position for transport.

After skin contact

Instantly wash with water and soap and rinse thoroughly.
Instantly rinse with water.

After eye contact

Rinse opened eye for several minutes under running water.



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.12.2023

Version number 1.0

Revision: 08.12.2023

Trade name: Renewablaze LPC4 R100

After swallowing

Do not induce vomiting; instantly call for medical help.

4.2 Most important symptoms and effects, both acute and delayed

Vapours may cause drowsiness and dizziness.
Prolonged contact may cause redness, irritation and dry skin.
Aspiration hazard

Danger

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents

CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol-resistant foam.

For safety reasons unsuitable extinguishing agents

Water with a full water jet.

5.2 Special hazards arising from the substance or mixture

Containers can burst violently or explode when heated, due to excessive pressure build-up.
The vapour is heavier than air, spreads along the ground and ignition at a greater distance is possible.

5.3 Advice for firefighters

Protective equipment:

Wear self-contained breathing apparatus.
Wear full protective suit.

Additional information

Cool endangered containers with water spray jet.
Collect contaminated fire fighting water separately. It must not enter drains.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep away from ignition sources
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation

6.2 Environmental precautions:

Do not allow product to reach sewage system or water bodies.
Prevent material from reaching sewage system, holes and cellars.
Inform respective authorities in case product reaches water or sewage system.



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.12.2023

Version number 1.0

Revision: 08.12.2023

Trade name: Renewablaze LPC4 R100

6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of contaminated material as waste according to item 13.
Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Good personal hygiene procedures should be implemented.
Ensure good ventilation/exhaustion at the workplace.
Keep containers tightly sealed.
Store in cool, dry place in tightly closed containers.
Keep away from heat and direct sunlight.
Open and handle container with care.
Prevent formation of aerosols.

Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep breathing equipment ready.

Handling

Do not eat, drink or smoke when using this product.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by

storerooms and containers:

Store in cool location.

Information about storage in one

common storage facility:

Not required.

Further information about

storage conditions:

Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.

7.3 Specific end use(s)

No further relevant information available.



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.12.2023

Version number 1.0

Revision: 08.12.2023

Trade name: Renewablaze LPC4 R100

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with critical values that require monitoring at the workplace:

1634-04-4 tert-butyl methyl ether

IOELV Short-term value: 367 mg/m³, 100 ppm

Long-term value: 183.5 mg/m³, 50 ppm

Additional information: The lists that were valid during the compilation were used as basis.

8.2 Exposure controls

Appropriate engineering

controls No further data; see section 7.

Individual protection measures, such as personal protective equipment

General protective and hygienic measures

Do not eat, drink or smoke while working.
Avoid contact with the eyes and skin.
Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Store protective clothing separately.
Pregnant women must strictly avoid inhalation or contact with the skin.
Ensure that washing facilities are available in the work place.
Do not ingest.

Breathing equipment:

Ensure good ventilation. This can be achieved by using a local exhaust or general exhaust system. If these measures are insufficient to keep the solvent vapour concentration below the workplace limit, wear an adequate respiratory protective device.

Filter A.

Filter AX.

Hand protection

Protective gloves.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Nitrile rubber, NBR

> 0,38 mm



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.12.2023

Version number 1.0

Revision: 08.12.2023

Trade name: Renewablaze LPC4 R100

Penetration time of glove
material

> 120 min (EN 374)

Eye/face protection

Tightly sealed safety glasses.

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

9.1 Information on basic physical and chemical properties

General Information

Physical state

Fluid

Colour:

Clear

Smell:

Characteristic

Odour threshold:

Not determined.

Melting point/freezing point:

Not determined

Boiling point or initial boiling point and boiling range

43.2-175.9 °C (ASTM D86)

Flammability

Not applicable.

Lower and upper explosion limit

Lower:

Not determined.

Upper:

Not determined.

Flash point:

<-30 °C (Closed cup, ASTM D93)

Decomposition temperature:

Not determined.

pH

Not determined.

Viscosity:

Kinematic viscosity at 40 °C

<20.5 mm²/s

dynamic:

Not determined.

Solubility

Water:

Not miscible or difficult to mix

Partition coefficient n-octanol/water (log value)

Not determined.

Vapour pressure at 37 °C:

477 hPa (ASTM D5191)

Density and/or relative density

Density at 15 °C

0.749 g/cm³ (ASTM D4052)

Relative density

Not determined.



Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.12.2023

Version number 1.0

Revision: 08.12.2023

Trade name: Renewablaze LPC4 R100

Vapour density	Not determined.
9.2 Other information	
Appearance:	
Form:	Fluid
Important information on protection of health and environment, and on safety.	
Explosive properties:	Product is not explosive. However, formation of explosive air/steam mixtures is possible.
Solvent content:	
VOC content (EU)	100 %
Change in condition	
Softening point/range	
Oxidising properties	Not applicable.
Evaporation rate	Not determined.
Information with regard to physical hazard classes	
Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Extremely flammable liquid and vapour.
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
Self-heating substances and mixtures	Void
Substances and mixtures, which emit flammable gases in contact with water	Void
Oxidising liquids	Void
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void
Desensitised explosives	Void



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.12.2023

Version number 1.0

Revision: 08.12.2023

Trade name: Renewablaze LPC4 R100

SECTION 10: Stability and reactivity

10.1 Reactivity	Stable at normal ambient temperatures and when used as recommended.
10.2 Chemical stability	
Conditions to be avoided:	No decomposition if used according to specifications.
10.3 Possibility of hazardous reactions	No dangerous reactions known
10.4 Conditions to avoid	Avoid heat, flames and other sources of ignition.
10.5 Incompatible materials:	Strong oxidizing agents
10.6 Hazardous decomposition products:	Heating may generate the following products: Oxides of carbon.

SECTION 11: Toxicological information

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

Acute toxicity Based on available data, the classification criteria are not met.
LD/LC50 values that are relevant for classification:

1634-04-4 tert-butyl methyl ether

Oral LD50 4,000 mg/kg (rat)
Dermal LD50 1,000 mg/kg (rabbit)
Inhalative LC50 /4 h 142 mg/L (rat)

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/irritation	Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	May cause genetic defects.
Carcinogenicity	May cause cancer.
Reproductive toxicity	Suspected of damaging the unborn child.
STOT-single exposure	May cause drowsiness or dizziness.
STOT-repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	May be fatal if swallowed and enters airways.

11.2 Information on other hazards

Endocrine disrupting properties

None of the ingredients is listed.

SECTION 12: Ecological information

12.1 Toxicity	Dangerous for the environment if discharged into watercourses
----------------------	---



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.12.2023

Version number 1.0

Revision: 08.12.2023

Trade name: Renewablaze LPC4 R100

Aquatic toxicity:	No further relevant information available.
12.2 Persistence and degradability	No further relevant information available.
12.3 Bioaccumulative potential	No further relevant information available.
12.4 Mobility in soil	No further relevant information available.
12.5 Results of PBT and vPvB assessment	
PBT:	Not applicable.
vPvB:	Not applicable.
12.6 Endocrine disrupting properties	The product does not contain substances with endocrine disrupting properties.
12.7 Other adverse effects	
Remark:	Toxic for fish
Additional ecological information:	
General notes:	Do not allow product to reach ground water, water bodies or sewage system, even in small quantities. Danger to drinking water if even extremely small quantities leak into soil. Also poisonous for fish and plankton in water bodies. Toxic for aquatic organisms

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation	Waste is classified as hazardous waste The generation of waste should be minimised or avoided wherever possible. External recovery, treatment, recycling and disposal of waste should comply with all applicable local and/or national regulations. Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Uncleaned packagings:	
Recommendation:	Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN number or ID number	
ADR/RID, IMDG, IATA	UN1203



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.12.2023

Version number 1.0

Revision: 08.12.2023

Trade name: Renewablaze LPC4 R100

14.2 UN proper shipping name ADR/RID IMDG IATA	1203 MOTOR SPIRIT, ENVIRONMENTALLY HAZARDOUS MOTOR SPIRIT, MARINE POLLUTANT MOTOR SPIRIT
14.3 Transport hazard class(es) ADR/RID   Class Label	3 (F1) Flammable liquids. 3
IMDG   Class Label	3 Flammable liquids. 3
IATA  Class Label	3 Flammable liquids. 3
14.4 Packing group ADR/RID, IMDG, IATA	II
14.5 Environmental hazards: Marine pollutant:	Product contains environmentally hazardous substances: Renewable hydrocarbons (naphtha type fraction) obtained from the catalytic transformation of ethanol. Symbol (fish and tree)



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.12.2023

Version number 1.0

Revision: 08.12.2023

Trade name: Renewablaze LPC4 R100

Special marking (ADR/RID):	Symbol (fish and tree)
14.6 Special precautions for user Kemler Number: EMS Number: Stowage Category	Warning: Flammable liquids. 33 F-E,S-E E
14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
Transport/Additional information:	
ADR/RID Limited quantities (LQ) Excepted quantities (EQ) Transport category Tunnel restriction code	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml 2 D/E
IMDG Limited quantities (LQ) Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN 1203 MOTOR SPIRIT, 3, II, ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information

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

EC number: 701-193-0

CAS No.: 86290-81-5 Gasoline

The above EC number(s) is(are) a specific subset of the CAS number(s) given, which serves as a reference for global inventories.



Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.12.2023

Version number 1.0

Revision: 08.12.2023

Trade name: Renewablaze LPC4 R100

TSCA (Toxic Substances Control Act)

Renewable hydrocarbons (naphtha type fraction) obtained from the catalytic transformation of ethanol.: All components are ACTIVE

637-92-3 propane, 2-ethoxy-2-methyl-: ACTIVE

1634-04-4 tert-butyl methyl ether: ACTIVE

Canadian Domestic Substances List (DSL)

Renewable hydrocarbons (naphtha type fraction) obtained from the catalytic transformation of ethanol.

1634-04-4 tert-butyl methyl ether

Philippines Inventory of Chemicals and Chemical Substances (PICCS)

Renewable hydrocarbons (naphtha type fraction) obtained from the catalytic transformation of ethanol.

1634-04-4 tert-butyl methyl ether

Chinese Chemical Inventory of Existing Chemical Substances (IECSC)

Renewable hydrocarbons (naphtha type fraction) obtained from the catalytic transformation of ethanol.

1634-04-4 tert-butyl methyl ether

Australian Inventory of Industrial Chemicals (AIIC)

Renewable hydrocarbons (naphtha type fraction) obtained from the catalytic transformation of ethanol.

1634-04-4 tert-butyl methyl ether

Korean Existing Chemical Inventory (KECI)

All ingredients are listed.

New Zealand Inventory of Chemicals (NZIoC)

All ingredients are listed.

Taiwan Chemical Substance Inventory (TCSI)

All ingredients are listed.

Japan Existing and New Chemical Substance List (ENCS)

Renewable hydrocarbons (naphtha type fraction) obtained from the catalytic transformation of ethanol.



Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.12.2023

Version number 1.0

Revision: 08.12.2023

Trade name: Renewablaze LPC4 R100

Directive 2012/18/EU

Named dangerous substances -

ANNEX I

None of the ingredients is listed.

Seveso category

P5a FLAMMABLE LIQUIDS

E2 Hazardous to the Aquatic Environment

**Qualifying quantity (tonnes) for
the application of lower-tier
requirements**

10 t

**Qualifying quantity (tonnes) for
the application of upper-tier
requirements**

50 t

REGULATION (EC) No 1907/2006

ANNEX XVII

Conditions of restriction: 3, 28, 29

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

REGULATION (EU) 2019/1148

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

National regulations

Information about limitation of

use:

Workers should not be exposed to the hazardous materials contained in this preparation.
Exceptions can be made by the authorities in certain exceptional cases.



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.12.2023

Version number 1.0

Revision: 08.12.2023

Trade name: Renewablaze LPC4 R100

15.2 Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

H224 Extremely flammable liquid and vapour.
H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H340 May cause genetic defects.
H350 May cause cancer.
H361d Suspected of damaging the unborn child.
H411 Toxic to aquatic life with long lasting effects.

Date of previous version:

16.11.2023

Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 1: Flammable liquids – Category 1
Flam. Liq. 2: Flammable liquids – Category 2
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Muta. 1B: Germ cell mutagenicity – Category 1B
Carc. 1B: Carcinogenicity – Category 1B
Repr. 2: Reproductive toxicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

* Data compared to the previous
version altered.