

D (+) LIMONENE FOR SYNTHESIS

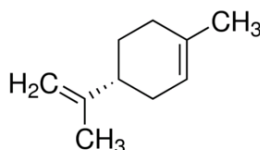
Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
SDS Reference Number: 04416
Issue date: 7/27/2013 Revision date: 4/4/2025 Supersedes version of: 7/27/2013 Version: 1.0

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

1.1. Product identifier

Product form : Substance
Trade name : D (+) LIMONENE FOR SYNTHESIS
EC Index-No. : 601-096-00-2
EC-No. : 227-813-5
CAS-No. : 5989-27-5
Product code : 04416
Type of product : Organic compound
Formula : C₁₀H₁₆
Chemical structure :



Synonyms : (+)-Carvene, (+)-p-Mentha-1,8-diene, (R)-4-iso-Propenyl-1-methyl-1-cyclohexene

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

Relevant identified uses

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances
Use of the substance/mixture : Solvents
Adhesive remover

1.3. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.
107 Wode House Road, Jehangir Villa, Colaba
400005 Mumbai
INDIA
T +91 22 6663 6663, F +91 22 6663 6699
info@lobachemie.com, www.lobachemie.com

1.4. Emergency telephone number

Emergency number : + 91 22 6663 6663 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

| | |
|---|------|
| Flammable liquids, Category 3 | H226 |
| Skin corrosion/irritation, Category 2 | H315 |
| Skin sensitisation, Category 1 | H317 |
| Aspiration hazard, Category 1 | H304 |
| Hazardous to the aquatic environment – Chronic Hazard, Category 1 | H410 |

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Flammable liquid and vapour. Causes skin irritation. May cause an allergic skin reaction. May be fatal if swallowed and enters airways. Very toxic to aquatic life with long lasting effects.

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2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

Hazard statements (CLP)

Precautionary statements (CLP)

- : Danger
- : H226 - Flammable liquid and vapour.
- : H304 - May be fatal if swallowed and enters airways.
- : H315 - Causes skin irritation.
- : H317 - May cause an allergic skin reaction.
- : H410 - Very toxic to aquatic life with long lasting effects.
- : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- : P273 - Avoid release to the environment.
- : P280 - Wear protective gloves, protective clothing, eye protection, face protection.
- : P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.
- : P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water .

2.3. Other hazards

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

| Name | Product identifier | % |
|----------------|---|-----|
| D (+) LIMONENE | CAS-No.: 5989-27-5 EC-No.: 227-813-5 EC Index-No.: 601-096-00-2 | 100 |

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Call a physician immediately.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice.
- First-aid measures after skin contact : Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash with plenty of water/.... Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. Specific treatment (see supplemental first aid instruction on this label). If skin irritation or rash occurs: If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Rinse mouth out with water. If you feel unwell, seek medical advice. Do not induce vomiting. Call a physician immediately.
- First-aid measures for first aider : First aid workers will be equipped with suitable personal protective equipment.

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

- Symptoms/effects after inhalation : May cause an allergic skin reaction.

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| | |
|-------------------------------------|--|
| Symptoms/effects after skin contact | : Causes skin irritation. Irritation. May cause an allergic skin reaction. |
| Symptoms/effects after eye contact | : None under normal conditions. |
| Symptoms/effects after ingestion | : Risk of lung oedema. |

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

| | |
|--------------------------------|--|
| Suitable extinguishing media | : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO ₂). Water spray. Dry powder. Foam. Carbon dioxide. |
| Unsuitable extinguishing media | : Do not use a heavy water stream. |

5.2. Special hazards arising from the substance or mixture

| | |
|--|--|
| Fire hazard | : Flammable liquid and vapour. |
| Explosion hazard | : May form flammable/explosive vapour-air mixture. |
| Hazardous decomposition products in case of fire | : Toxic fumes may be released. |

5.3. Advice for firefighters

| | |
|--------------------------------|---|
| Firefighting instructions | : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection. |
| Protection during firefighting | : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. |

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

| | |
|------------------|---|
| General measures | : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking. Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage. |
|------------------|---|

For non-emergency personnel

| | |
|----------------------|---|
| Protective equipment | : Wear recommended personal protective equipment. |
| Emergency procedures | : Ventilate spillage area. Evacuate unnecessary personnel. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray. |

For emergency responders

| | |
|----------------------|---|
| Protective equipment | : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". |
| Emergency procedures | : Evacuate unnecessary personnel. Stop leak if safe to do so. |

6.2. Environmental precautions

Avoid release to the environment. Very toxic to aquatic life with long lasting effects.

6.3. Methods and material for containment and cleaning up

| | |
|-------------------------|--|
| For containment | : Collect spillage. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible. |
| Methods for cleaning up | : Take up liquid spill into absorbent material. Collect spillage. On land, sweep or shovel into suitable containers. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Notify authorities if product enters sewers or public waters. |
| Other information | : Dispose of materials or solid residues at an authorized site. |

6.4. Reference to other sections

For further information refer to section 13.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

| | |
|-----------------------------------|---|
| Additional hazards when processed | : Handle empty containers with care because residual vapours are flammable. |
| Precautions for safe handling | : Ensure good ventilation of the work station. No open flames. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Avoid breathing dust/fume/gas/mist/vapours/spray. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Avoid contact with skin and eyes. |
| Hygiene measures | : Wash hands, forearms and face thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. |

7.2. Conditions for safe storage, including any incompatibilities

| | |
|------------------------|---|
| Technical measures | : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. |
| Storage conditions | : Keep container tightly closed. Store in original container. Store in a dry place. Store in a well-ventilated place. Keep cool. Store locked up. |
| Incompatible materials | : Heat sources. |
| Packaging materials | : Store always product in container of same material as original container. |

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

Chemical goggles or safety glasses

Skin protection

Skin and body protection:

Wear a mask

Hand protection:

Protective gloves

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Respiratory protection

Respiratory protection:

Wear appropriate mask

Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|---|
| Physical state | : Liquid |
| Colour | : Colourless to pale yellow. |
| Appearance | : Clear liquid. |
| Molecular mass | : 136.24 g/mol |
| Odour | : Citrus odour. |
| Odour threshold | : Not available |
| Melting point | : Not applicable |
| Freezing point | : -74.35 °C |
| Boiling point | : 175 – 178 °C |
| Flammability | : Flammable liquid and vapour. |
| Lower explosion limit | : 0.7 vol % |
| Upper explosion limit | : 6.1 vol % |
| Flash point | : 48 °C |
| Auto-ignition temperature | : 237 °C |
| Decomposition temperature | : Not available |
| pH | : Not available |
| Viscosity, kinematic | : Not available |
| Solubility | : Water: Immiscible Ethanol: Miscible with ethanol Ether: Miscible with ether |
| Partition coefficient n-octanol/water (Log Kow) | : Not available |
| Vapour pressure | : 1.98 mm Hg at 25 °C |
| Vapour pressure at 50 °C | : Not available |
| Density | : 0.841 g/cm ³ at 20 °C |
| Relative density | : Not available |
| Relative vapour density at 20 °C | : 4.7 (Air = 1) |
| Particle characteristics | : Not applicable |

9.2. Other information

Other safety characteristics

Refractive index : 1.473 at 20 °C/D

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour.

10.2. Chemical stability

Flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Open flame. Overheating. Direct sunlight. Heat. Sparks. Avoid contact with hot surfaces. No flames, no sparks. Eliminate all sources of ignition.

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10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

May release flammable gases.

SECTION 11: Toxicological information

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

| | |
|-----------------------------------|---|
| Acute toxicity (oral) | : Not classified |
| Acute toxicity (dermal) | : Not classified |
| Acute toxicity (inhalation) | : Not classified |
| Skin corrosion/irritation | : Causes skin irritation. |
| Serious eye damage/irritation | : Not classified |
| Respiratory or skin sensitisation | : May cause an allergic skin reaction. |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| STOT-single exposure | : Not classified |
| STOT-repeated exposure | : Not classified |
| Aspiration hazard | : May be fatal if swallowed and enters airways. |

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

| | |
|---|---|
| Ecology - general | : Very toxic to aquatic life with long lasting effects. |
| Ecology - water | : Very toxic to aquatic life with long lasting effects. |
| Hazardous to the aquatic environment, short-term (acute) | : Not classified |
| Hazardous to the aquatic environment, long-term (chronic) | : Very toxic to aquatic life with long lasting effects. |

12.2. Persistence and degradability

D (+) LIMONENE FOR SYNTHESIS (5989-27-5)

| | |
|-------------------------------|--------------------|
| Persistence and degradability | Rapidly degradable |
|-------------------------------|--------------------|

D (+) LIMONENE (5989-27-5)

| | |
|-------------------------------|---|
| Persistence and degradability | May cause long-term adverse effects in the environment. |
|-------------------------------|---|

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

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12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

| | |
|--|--|
| Regional waste regulation | : Disposal must be done according to official regulations. |
| Waste treatment methods | : Dispose of contents/container in accordance with licensed collector's sorting instructions. |
| Sewage disposal recommendations | : Disposal must be done according to official regulations. |
| Product/Packaging disposal recommendations | : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. Disposal must be done according to official regulations. |
| Additional information | : Handle empty containers with care because residual vapours are flammable. Flammable vapours may accumulate in the container. Do not re-use empty containers. |

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number or ID number

| | |
|---------------|-----------|
| UN-No. (ADR) | : UN 2052 |
| UN-No. (IMDG) | : UN 2052 |
| UN-No. (IATA) | : UN 2052 |
| UN-No. (ADN) | : UN 2052 |
| UN-No. (RID) | : UN 2052 |

14.2. UN proper shipping name

| | |
|--|---|
| Proper Shipping Name (ADR) | : DIPENTENE |
| Proper Shipping Name (IMDG) | : DIPENTENE |
| Proper Shipping Name (IATA) | : Dipentene |
| Proper Shipping Name (ADN) | : DIPENTENE |
| Proper Shipping Name (RID) | : DIPENTENE |
| Transport document description (ADR) (ADR) | : UN 2052 DIPENTENE, 3, III, (D/E), ENVIRONMENTALLY HAZARDOUS |
| Transport document description (IMDG) | : UN 2052 DIPENTENE, 3, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS (43°C c.c.) |
| Transport document description (IATA) | : UN 2052 Dipentene, 3, III, ENVIRONMENTALLY HAZARDOUS |
| Transport document description (ADN) | : UN 2052 DIPENTENE, 3, III, ENVIRONMENTALLY HAZARDOUS |
| Transport document description (RID) | : UN 2052 DIPENTENE, 3, III, ENVIRONMENTALLY HAZARDOUS |

14.3. Transport hazard class(es)

ADR

| | |
|----------------------------------|-----|
| Transport hazard class(es) (ADR) | : 3 |
| Danger labels (ADR) | : 3 |



IMDG

| | |
|-----------------------------------|-----|
| Transport hazard class(es) (IMDG) | : 3 |
| Danger labels (IMDG) | : 3 |



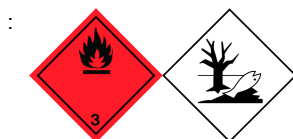
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IATA

Transport hazard class(es) (IATA) : 3
Danger labels (IATA) : 3



ADN

Transport hazard class(es) (ADN) : 3
Danger labels (ADN) : 3



RID

Transport hazard class(es) (RID) : 3
Danger labels (RID) : 3



14.4. Packing group

Packing group (ADR) : III
Packing group (IMDG) : III
Packing group (IATA) : III
Packing group (ADN) : III
Packing group (RID) : III

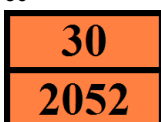
14.5. Environmental hazards

Dangerous for the environment : Yes
Marine pollutant : Yes
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-E
Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR) : F1
Limited quantities (ADR) : 5I
Excepted quantities (ADR) : E1
Packing instructions (ADR) : P001, IBC03, LP01, R001
Mixed packing provisions (ADR) : MP19
Portable tank and bulk container instructions (ADR) : T2
Portable tank and bulk container special provisions (ADR) : TP1
Tank code (ADR) : LGBF
Vehicle for tank carriage : FL
Transport category (ADR) : 3
Special provisions for carriage - Packages (ADR) : V12
Special provisions for carriage - Operation (ADR) : S2
Hazard identification number (Kemler No.) : 30
Orange plates :



Tunnel restriction code (ADR) : D/E

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EAC code : 3Y

Transport by sea

Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E1
Packing instructions (IMDG) : P001, LP01
IBC packing instructions (IMDG) : IBC03
Tank instructions (IMDG) : T2
Tank special provisions (IMDG) : TP1
Stowage category (IMDG) : A
Flash point (IMDG) : 43°C c.c.
Properties and observations (IMDG) : Colourless liquid with a lemon-like odour. Flashpoint: 43°C c.c. Explosive limits: 0.7% to 6.1%. Immiscible with water.
MFAG-No : 128

Air transport

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y344
PCA limited quantity max net quantity (IATA) : 10L
PCA packing instructions (IATA) : 355
PCA max net quantity (IATA) : 60L
CAO packing instructions (IATA) : 366
CAO max net quantity (IATA) : 220L
ERG code (IATA) : 3L

Inland waterway transport

Classification code (ADN) : F1
Limited quantities (ADN) : 5 L
Excepted quantities (ADN) : E1
Equipment required (ADN) : PP, EX, A
Ventilation (ADN) : VE01
Number of blue cones/lights (ADN) : 0

Rail transport

Classification code (RID) : F1
Limited quantities (RID) : 5L
Excepted quantities (RID) : E1
Packing instructions (RID) : P001, IBC03, LP01, R001
Mixed packing provisions (RID) : MP19
Portable tank and bulk container instructions (RID) : T2
Portable tank and bulk container special provisions (RID) : TP1
Tank codes for RID tanks (RID) : LGBF
Transport category (RID) : 3
Special provisions for carriage – Packages (RID) : W12
Colis express (express parcels) (RID) : CE4
Hazard identification number (RID) : 30

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

| EU restriction list (REACH Annex XVII) | |
|--|------------------------------|
| Reference code | Applicable on |
| 3(a) | D (+) LIMONENE FOR SYNTHESIS |
| 3(b) | D (+) LIMONENE FOR SYNTHESIS |
| 3(c) | D (+) LIMONENE FOR SYNTHESIS |
| 40. | D (+) LIMONENE FOR SYNTHESIS |

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (2024/590)

Not listed on the Ozone Depletion list (Regulation EU 2024/590)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

National regulations

Germany

VOC ordinance (ChemVOCFarbV)

:

Water hazard class (WGK)

: WGK 2, Significantly hazardous to water (Classification according to AwSV; ID No. 87).

Major Accidents Ordinance (12. BImSchV)

: Is not subject to the Major Accidents Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen

: The substance is not listed

SZW-lijst van mutagene stoffen

: The substance is not listed

SZW-lijst van reprotoxische stoffen – Borstvoeding

: The substance is not listed

SZW-lijst van reprotoxische stoffen –

: The substance is not listed

Vruchtbaarheid

SZW-lijst van reprotoxische stoffen – Ontwikkeling

: The substance is not listed

Denmark

Class for fire hazard

: Class II-1

Store unit

: 5 liter

Classification remarks

: R10 <H226;H304;H315;H317;H410>; Emergency management guidelines for the storage of flammable liquids must be followed

Danish National Regulations

: Young people below the age of 18 years are not allowed to use the product

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Poland

Polish National Regulations

: Act of 25 February 2011 on chemical substances and their mixtures (J. o L. No. 63, item 322 as amended; consolidated text J. o L. 2019, item 1225).
Act of 14 December 2012 on waste (J. o L. 2013, item 322 as amended; consolidated text J. o L. 2020, item 797).
The announcement of Marshal of the Sejm of the Republic of Poland dated 19 October 2016 concerning the consolidated text announcement of the decree on the management of packaging and packaging waste (J. o L. 2016, item 1863 as amended).
Decree of the Minister of Environment of 14 December 2014 on the catalogue of waste (J. o L. 2014, item 1923).
Act of 19 August 2011 on the Carriage of Dangerous Goods (J. o L. 2011 No. 227, item 1367 as amended; consolidated text J. o L. 2020, item 154).
Regulation of the Minister of Family, Labour and Social Policy of 12 June 2018 on the highest permissible concentration and intensity of noxious agents for health at work environment (J. o L. item 1286 as amended).
The announcement of Minister of Health dated 9 September 2016 concerning the consolidated text announcement of the decree of the Minister of Health of 30 December 2004 on health and safety at work related to exposure to chemical agents at work (J. o L. of 16 September 2016, item 1488)
Regulation of the Minister of Health of 2 February 2011 on tests and measurements of the noxious agents for health at work environment (J. o L. No. 33, item 166 as amended).
Regulation of the Minister of Environment of 9 December 2003 on particularly hazardous substances to the environment (J. o L. No. 217, item 2141).
ADR Agreement: Government Statement of 13 March 2023 on the entry into force of amendments to Annexes A and B to the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), signed in Geneva on 30 September 1957 (J. o. L. 2023, item 891)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

| Abbreviations and acronyms: | |
|-----------------------------|---|
| ACGIH | American Conference of Government Industrial Hygienists |
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| ATE | Acute Toxicity Estimate |
| BCF | Bioconcentration factor |
| BLV | Biological limit value |
| BOD | Biochemical oxygen demand (BOD) |
| CAS-No. | Chemical Abstract Service number |
| CLP | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 |
| COD | Chemical oxygen demand (COD) |
| CSA | Chemical safety assessment |
| DMEL | Derived Minimal Effect level |
| DNEL | Derived-No Effect Level |
| EC-No. | European Community number |
| EC50 | Median effective concentration |
| ED | Endocrine disruptor |

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| Abbreviations and acronyms: | |
|-----------------------------|--|
| EN | European Standard |
| EWC | European waste catalogue |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| LC50 | Median lethal concentration |
| LD50 | Median lethal dose |
| LOAEL | Lowest Observed Adverse Effect Level |
| Log Kow | Partition coefficient n-octanol/water (Log Kow) |
| Log Pow | Partition coefficient n-octanol/water (Log Pow) |
| MAK | maximum workplace concentration |
| NOAEC | No-Observed Adverse Effect Concentration |
| NOAEL | No-Observed Adverse Effect Level |
| NOEC | No-Observed Effect Concentration |
| N.O.S. | Not Otherwise Specified |
| OECD | Organisation for Economic Co-operation and Development |
| OEL | Occupational Exposure Limit |
| OSHA | Occupational Safety & Health Administration |
| PBT | Persistent Bioaccumulative Toxic |
| PNEC | Predicted No-Effect Concentration |
| PPE | Personal protection equipment |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SDS | Safety Data Sheet |
| STP | Sewage treatment plant |
| TF | Technical function |
| ThOD | Theoretical oxygen demand (ThOD) |
| TLM | Median Tolerance Limit |
| TWA | Time Weighted Average |
| VOC | Volatile Organic Compounds |
| vPvB | Very Persistent and Very Bioaccumulative |
| UFI | Unique Formula Identifier |

| Full text of H- and EUH-statements: | |
|-------------------------------------|---|
| Aquatic Chronic 1 | Hazardous to the aquatic environment – Chronic Hazard, Category 1 |
| Asp. Tox. 1 | Aspiration hazard, Category 1 |
| Flam. Liq. 3 | Flammable liquids, Category 3 |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| Skin Sens. 1 | Skin sensitisation, Category 1 |
| H226 | Flammable liquid and vapour. |

D (+) LIMONENE FOR SYNTHESIS

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Full text of H- and EUH-statements:

| | |
|------|---|
| H304 | May be fatal if swallowed and enters airways. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H410 | Very toxic to aquatic life with long lasting effects. |

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.