Safety data sheet
according to Article 31 of Regulation No 1907/2006/EC (REACH)

Printing date: 02.01.2023 Version number: 14.0 Revision date: 02.01.2023

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

· **1.1 Product identifier**
· **Trade name: DIPENTENE 38 D**
· **Common substance name:** Reaction mass of dl-limonene, alpha- gamma- terpinenes and terpinolene
· **Substance name according to REACH identification requirements:**
Reaction mass of (4R)-isopropenyl-1-methylcyclohexene and (4S)-isopropenyl-1-methylcyclohexene and 1-isopropyl-4-methylcyclohexa-1,3-diene and 1-isopropyl-4-methylcyclohexa-1,4-diene and 4-isopropylidene-1-methylcyclohexene
· **EC number:** 905-474-0
· **REACH Registration number:** 01-2120751242-64-0000

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
Relevant identified uses: production of the substance, formulation, fragrance substance

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
LES DERIVES RESINIQUES & TERPENIQUES (DRT)
30 rue Gambetta
BP 90206
40105 DAX CEDEX
FRANCE
Tel: 33-(0)5 58 56 62 00
Fax: 33-(0)5 58 56 62 40
Email: fds@drt.fr

· **1.4 Emergency telephone numbers**
NCEC (24/24 – 7/7)
Europe: +44 1235 239670
Global / English speaking countries: +44 1865 407333
Other countries: see section 16

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008:**


GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.


GHS08 health hazard

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


GHS09 environment

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


GHS07 exclamation mark

Skin Irrit. 2 H315 Causes skin irritation.
Skin Sens. 1B H317 May cause an allergic skin reaction.

· **Information concerning particular hazards for human and environment:**
Effects on human health:
if swallowed accidentally, the product may enter the lungs due to its low viscosity and lead to the rapid development of very serious pulmonary lesions (medical survey for 48 hours minimum).

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· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008:**
The substance is classified and labelled according to the CLP regulation.
· **Hazard pictograms:**

GHS02 GHS07 GHS08 GHS09

· **Signal word:** Danger
· **Hazard statements:**
H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H304 May be fatal if swallowed and enters airways.
H411 Toxic to aquatic life with long lasting effects.
· **Precautionary statements:**
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P331 Do NOT induce vomiting.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P501 Dispose of contents and container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:**
According to Annex XIII of REACH Regulation, the substance is not considered to be Persistent, Bioaccumulative and Toxic.
· **vPvB:**
According to Annex XIII of REACH Regulation, the substance is not considered to be very Persistent and very Bioaccumulative.
· **Determination of endocrine-disrupting properties**
The substance is not included in the list established in accordance with Article 59(1) of REACH regulation for having endocrine disrupting properties, and is not a substance identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/210056 or Commission Regulation (EU) 2018/605.

SECTION 3: Composition/information on ingredients

· **3.1 Substances**
According to REACH identification rules, this product is a multiconstituent substance, consisting of the following constituents (> 10%):
- d-limonene [(4R)-isopropenyl-1-methylcyclohexene - CAS 5989-27-5]
- l-limonene [(4S)-isopropenyl-1-methylcyclohexene - CAS 5989-54-8]
- alpha-terpinene (1-isopropyl-4-methylcyclohexa-1,3-diene - CAS 99-86-5)
- gamma-terpinene (1-isopropyl-4-methylcyclohexa-1,4-diene - CAS 99-85-4)
- terpinolene (4-isopropylidene-1-methylcyclohexene - CAS 586-62-9)
According to REACH, components present at less than 10% are considered as impurities.
· **Identification number(s)**
· **EC number:** 905-474-0
· **Description:**
Reaction mass of d-limonene [(R)-p-mentha-1,8-diene - CAS 5989-27-5], l-limonene [(S)-p-mentha-1,8-diene - CAS 5989-54-8], alpha-terpinene (p-mentha-1,3-diene - CAS 99-86-5), gamma-terpinene (p-mentha-1,4-diene - CAS 99-85-4) and terpinolene (p-mentha-1,4(8)-diene - CAS 586-62-9)

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· **Impurities and stabilising additives (classified as hazardous):**	
CAS: 99-87-6 EINECS: 202-796-7	paracymene Flam. Liq. 3, H226; Acute Tox. 3, H331; Repr. 2, H361f; Asp. Tox. 1, H304; Aquatic Chronic 2, H411
CAS: 79-92-5 EINECS: 201-234-8	camphene Flam. Sol. 1, H228; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Eye Irrit. 2, H319
CAS: 555-10-2 EINECS: 209-081-9	beta-phellandrene Flam. Liq. 3, H226; Asp. Tox. 1, H304
CAS: 80-56-8 EINECS: 201-291-9	alpha-pinene Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1B, H317
CAS: 127-91-3 EINECS: 204-872-5	beta-pinene Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Irrit. 2, H315; Skin Sens. 1B, H317
CAS: 470-82-6 EINECS: 207-431-5	1,8-cineole Flam. Liq. 3, H226; Skin Sens. 1B, H317
CAS: 470-67-7 EINECS: 207-428-9	1,4-cineole Flam. Liq. 3, H226

All impurities classified as very toxic to aquatic life categories acute 1 and chronic 1 have a M factor equal to 1.

· **Additional information:** For the wording of the listed hazard statements, refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **After inhalation:**
Supply fresh air. If symptoms are experienced, get medical attention.
In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:**
Immediately rinse with plenty of water.
Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Get medical attention if irritation or skin rash occurs.

· **After eye contact:**
Immediately rinse with plenty of water. Remove contact lenses, if present and easy to do. Hold eyelids apart and flush eyes with plenty of cool low-pressure water for 15 minutes. Consult an ophthalmologist.

· **After swallowing:**
Do NOT induce vomiting.
If the person is conscious, rinse out mouth with water.
Call for a doctor immediately.

· **4.2 Most important symptoms and effects, both acute and delayed** Pulmonary effects if swallowed accidentally.

· **4.3 Indication of any immediate medical attention and special treatment needed**
If swallowed accidentally, medical survey for 48 hours minimum.

SECTION 5: Firefighting measures

· **5.1 Suitable extinguishing agents**
Foam
Fire-extinguishing powder
Carbon dioxide (CO_2)

· **5.2 Special hazards arising from the substance or mixture** In case of fire, may release irritant and toxic fumes.

· **5.3 Advice for firefighters**

· **Protective equipment:**
Firefighters should wear appropriate protective equipment and self-contained breathing apparatus.

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· **Additional information:** Cool endangered receptacles with water spray.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear appropriate personal protective equipment. Keep unprotected persons away.
Provide adequate ventilation.
Keep away from sources of ignition.
· **6.2 Environmental precautions**
Do not allow product to reach soil, waterways, drains and sewers.
Inform the relevant authorities if the product has caused environmental pollution (soil, waterways, drains or sewers).
· **6.3 Methods and material for containment and cleaning up**
Small spills:
Absorb spilled liquid with inert absorbent. Collect in an appropriate container properly labelled. Close it for disposal.
Large spills:
Stop spill if it can be done without danger. Dike. Pump as much liquid as possible with an explosion-proof pump or a hand pump. Absorb the remaining liquid with inert absorbent. Collect in an appropriate container properly labelled. Close it for disposal. Use only non-sparking tools.
· **6.4 Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Wear appropriate personal protective equipment. Provide adequate ventilation in the workplace.
· **Information about fire - and explosion protection:**
Protect against electrostatic charges.
Use only non-sparking tools.
Keep ignition sources away.
Protect from heat.
· **7.2 Conditions for safe storage**
Store if possible under cover in a dry, cool and well-ventilated area.
Keep container type drums or ecobulk tightly closed.
All equipments including ventilation systems must be equipotential and earthed.
Keep away from sources of ignition.
Protect drums or ecobulk from high heat and direct sunlight.
· **Further information about storage conditions:**
Recommended materials for storage: stainless steel, aluminium.
Some plastics and elastomers may not be compatible with the product.
· **7.3 Specific end use(s)** Only identified uses listed in section 1 are covered by exposure scenarios.

SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**
· **Components with limit values that require monitoring at the workplace:**
dipentene (dl-limonene - CAS 138-86-3)
Norway: limit value - 8 hours = 140 mg/m³ (25 ppm)
Sweden: limit value - 8 hours = 150 mg/m³ (25 ppm)
Sweden: limit value - short term = 300 mg/m³ (50 ppm)
d-Limonene (CAS 5989-27-5) - one of the two isomers of dipentene (CAS 138-86-3)
Finland: limit value - 8 hours = 140 mg/m³ (25 ppm)
Finland: limit value - short term = 280 mg/m³ (50 ppm)
Germany (AGS): limit value - 8 hours = 28 mg/m³ (5 ppm)
Germany (AGS): limit value - short term = 110 mg/m³ (20 ppm)

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Germany (DFG): limit value - 8 hours = 28 mg/m³ (5 ppm)
Germany (DFG): limit value - short term = 112 mg/m³ (20 ppm)
Norway: limit value - 8 hours = 140 mg/m³ (25 ppm)
Switzerland: limit value - 8 hours = 40 mg/m³ (7 ppm)
Switzerland: limit value - short term = 80 mg/m³ (14 ppm)
Spain: limit value - 8 hours = 168 mg/m³ (30 ppm)
paracymene (CAS 99-87-6)
Belgium: limit value - 8 hours = 100 mg/m³ (20 ppm)
Denmark: limit value - 8 hours = 135 mg/m³ (25 ppm)
Denmark: limit value - short term = 270 mg/m³ (50 ppm)
Sweden: limit value - 8 hours = 140 mg/m³ (25 ppm)
Sweden: limit value - short term = 190 mg/m³ (35 ppm)
alpha-pinene multiconstituent (common CAS 80-56-8)
Belgium: limit value - 8 hours = 20 ppm
Norway: limit value - 8 hours = 140 mg/m³ (25 ppm)
Sweden: limit value - 8 hours = 150 mg/m³ (25 ppm)
Sweden: limit value - short term = 300 mg/m³ (50 ppm)
Switzerland: limit value - 8 hours = 112 mg/m³ (20 ppm)
Switzerland: limit value - short term = 224 mg/m³ (40 ppm)
beta-pinene (CAS 127-91-3)
Belgium: limit value - 8 hours = 20 ppm
Denmark: limit value - 8 hours = 140 mg/m³ (25 ppm)
Denmark: limit value - short term = 280 mg/m³ (50 ppm)
Norway: limit value - 8 hours = 140 mg/m³ (25 ppm)
Sweden: limit value - 8 hours = 150 mg/m³ (25 ppm)
Sweden: limit value - short term = 300 mg/m³ (50 ppm)
Switzerland: limit value - 8 hours = 112 mg/m³ (20 ppm)
Switzerland: limit value - short term = 224 mg/m³ (40 ppm)
terpenes
Austria: limit value - 8 hours = 560 mg/m³ (100 ppm)
Austria: limit value - short term = 560 mg/m³ (100 ppm)
Denmark: limit value - 8 hours = 25 ppm
Denmark: limit value - short term = 50 ppm
Sweden: limit value - 8 hours = 150 mg/m³ (25 ppm)
Sweden: limit value - short term = 300 mg/m³ (50 ppm)
Switzerland: limit value - 8 hours = 112 mg/m³ (20 ppm)
Switzerland: limit value - short term = 224 mg/m³ (40 ppm)

· **DNELs**

· **DNEL (Derived No-Effect Level): Workers - Long-term exposure**
Systemic effects - inhalation: 5.05 mg/m³
Systemic effects - dermal: 1.43 mg/kg body weight/day

· **DNEL (Derived No-Effect Level): General population - Long-term exposure**
Systemic effects - inhalation: 0.757 mg/m³
Systemic effects - dermal: 0.512 mg/kg body weight/day
Systemic effects - oral: 0.512 mg/kg body weight/day

· **PNECs**

· **PNEC (Predicted No-Effect Concentration) aqua (freshwater):** 1,76 µg/L
· **PNEC (Predicted No-Effect Concentration) aqua (marine water):** 0,176 µg/L
· **PNEC (Predicted No-Effect Concentration) Sewage Treatment Plant:** 0,2 mg/L
· **PNEC (Predicted No-Effect Concentration) sediment (freshwater):** 0.431 mg/kg sediment dry weight
· **PNEC (Predicted No-Effect Concentration) sediment (marine water):** 0.043 mg/kg sediment dry weight
· **PNEC (Predicted No-Effect Concentration) soil:** 0.085 mg/kg soil dry weight
· **PNEC (Predicted No-Effect Concentration) oral:** 19.46 mg/kg food

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· **Additional information:**
This sheet is based on the current valid lists for occupational exposure limit values at the time of its preparation. The DNELs and PNECs values are derived from the chemical safety assessment conducted for REACH.
Occupational exposure limits and DNELs are health-based but they are not necessarily set in the same way. The primary duty is to comply with risk management measures which enable to limit exposures as much as possible and to be in line with exposure reference levels.

· **8.2 Exposure controls**
· **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
Immediately remove all soiled and contaminated clothing.
Avoid contact with eyes and skin.
· **Personal protective equipment**
· **Respiratory protection:**
If ventilation is insufficient, use a breathing apparatus (filtering device with type A cartridge or insulating device with a source of fresh air independent of the ambient air).
· **Hand protection**
Protective gloves resistant to chemicals (standard EN 374-1). They should be replaced regularly and if there is any indication of degradation.
· **Eye/face protection**
Safety glasses (standard EN 166).
For qualifiying operations with increased risk (eg: connection/disconnection of hoses, purges, sampling, etc.) wear safety glasses (standard EN 166) AND a face shield.
· **Body protection:** Protective work clothing.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**
· **General Information**
· **Appearance:**

· **Physical state:**	Liquid
· **Colour:**	Colourless - slightly yellow
· **Odour:**	Citrus
· **Odour threshold:**	Not determined
· **Change in condition**	
· **Melting/freezing point:**	-134.4℃ [OECD 102 / Regulation (EC) No. 440/2008 / EU A1 test / Differential Scanning Calorimetry method (DSC) / 101 325 Pa]
· **Boiling point or boiling range:**	176℃ [OECD 103 / Regulation (EC) No. 440/2008 / EU A2 test / Differential Scanning Calorimetry method (DSC) / 101 325 Pa]
· **Flammability:**	The substance is ignitable
· **Lower and upper explosion limits**	
· **Lower:**	No data available
· **Upper:**	No data available
· **Flash point:**	53℃ [Regulation (EC) No. 440/2008 / EU A9 test / equilibrium method (setaflash method - closed cup) / 101 325 Pa]
· **Auto-ignition temperature:**	229℃ [Regulation (EC) No. 440/2008 / EU A15 test / spontaneous inflammation temperature of liquids and gases / 101 325 Pa]
· **Decomposition temperature:**	Not determined
· **pH value:**	Not applicable
· **Viscosity**	
· **Kinematic viscosity:**	Not determined
· **Dynamic viscosity:**	< 1.5 mPa.s (20℃ and 40℃ - shear rate 264 s^{-1}) [OECD 114 / rotational viscometer method]

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· **Solubility**	
· **in water:**	5.69 (25°C) [value obtained with d-limonene / OECD 105 and 123 / Regulation (EC) No. 440/2008 / EU A6 test / column elution method / slowstirring method]
· **Partition coefficient (n-octanol/water):**	log Kow = 4.38 (37°C) [value obtained with d-limonene / similar to OECD 117 / HPLC method (Reverse Phase High Performance Liquid Chromatographic method) / pH = 7.2]
· **Vapour pressure:**	106 Pa (20°C); 145 Pa (25°C) [OECD 104 / Regulation (EC) No. 440/2008 / EU A4 test / static method]
· **Density and/or relative density**	
· **Relative density:**	0.843 - 0.851 (20°C) [OECD 109 / Regulation (EC) No. 440/2008 / EU A3 test / oscillating densitimeter]
· **Vapour density:**	Not determined
· **Explosive properties:**	The substance does not contain any chemical groups associated with explosive properties
· **Oxidising properties:**	The substance does not contain any chemical groups associated with oxidising properties
· **Evaporation rate:**	Not determined
· **9.2 Other information**	No other data

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No data from specific reactivity tests are available for this product or this class of product.
· **10.2 Chemical stability**
Product stable under storage and handling conditions according to specifications (see section 7).
· **10.3 Possibility of hazardous reactions**
No hazardous reactions known except those with incompatible products listed in point 10.5.
· **10.4 Conditions to avoid**
Prolonged or excessive heat and/or exposure to air may cause non-hazardous decomposition and/or oxidation of the substance. Keep away from any flame or source of sparks.
· **10.5 Incompatible materials**
Strong acids
Strong oxidising agents
· **10.6 Hazardous decomposition products** No dangerous decomposition products known.

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_{50}/LC_{50} values relevant for classification:**

Oral	LD_{50}	> 2 000 mg/kg (rat) (OECD 423)
Dermal	LD_{50}	> 2 000 mg/kg (rat) (OECD 402)

· **Skin corrosion/irritation:**
The substance is classified as skin irritant (category 2) due to the presence of dl-limonene.
d-limonene (CAS 5989-27-5)
Moderate irritating effects, observed on rabbit in a skin irritation study conducted according to OECD 404 Guideline, lead to classify d-limonene as skin irritant.
· **Serious eye damage/irritation:**
The substance is not classified as eye irritant based on the results from an in vitro eye irritation study conducted on Reconstructed human Cornea-like Epithelium according to OECD 492 Guideline.

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· **Skin sensitisation:**
The substance is classified as skin sensitizer category 1B as effects were observed in the murine Local Lymph Node Assay conducted according to OECD 429 Guideline (LLNA).
· **Mutagenicity/genotoxicity:**
Results of the tests conducted with the substance show that it has no genotoxic potential:
- no mutagenic effects were observed in an Ames test (OECD 471 Guideline);
- no mutagenic effects were observed in an in vitro gene mutation test on Chinese hamster ovary cells (OECD 476 Guideline);
- no genotoxic effects were observed in an in vitro micronucleus test in human lymphocytes (OECD 487 Guideline).
· **Carcinogenicity:**
The product is not expected to be carcinogenic: no mutagenic effects were observed with the substance and there is no evidence from the repeated dose toxicity study that the substance is able to induce hyperplasia or pre-neoplastic lesions.
· **Reproductive toxicity:**
No toxic effects for reproduction and development are expected from this substance based on the results below. In a combined repeated dose and reproduction/developmental screening test, conducted on rat, according to OECD 422 Guideline, no effects were observed on reproductive performance, gestation parameters, pup survival and development, at dose levels up to 5 000 ppm.
NOAEL = 5 000 ppm
NOAEL - systemic toxicity for males and females (P) = 298 mg/kg body weight/day and 316 mg/kg body weight/day respectively
NOAEL (females during gestation) = 333 mg/kg body weight/day
· **Specific target organ toxicity - single exposure:**
No specific target organ toxicity was observed in the LD_{50} determination studies.
· **Specific target organ toxicity - repeated exposure:**
The available data presented below do not lead to any classification.
A combined repeated dose and reproduction/developmental screening test was conducted according to OECD 422 Guideline. Daily administration of the substance by diet for 42 days to male and unmated female rats was generally well tolerated at dose levels up to 5 000 ppm. Only effects considered as adaptative were observed.
NOAEL = 5 000 ppm (298 mg/kg body weight/day for males and 316 mg/kg body weight/day for unmated females)
· **Aspiration hazard:** If swallowed accidentally, the product may enter the respiratory tract due to its low viscosity.

· **Additional toxicological information:**
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):**
According to Regulation (EC) No 1272/2008, the substance is not considered to be CMR.
· **11.2 Information on other hazards**
· **Endocrine disrupting properties**
The substance is not included in the list established in accordance with Article 59(1) of REACH regulation for having endocrine disrupting properties, and is not a substance identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/210056 or Commission Regulation (EU) 2018/605.

SECTION 12: Ecological information

· **12.1 Aquatic toxicity**
The substance is classified (hazardous to aquatic life - long term - category 2) based on data below.
dipentene multiconstituent (dipentene, alpha-terpinene, gamma-terpinene and terpinolene)
EC_{50} (48 h), daphnia (Daphnia magna): 1.76 mg/L (nominal concentration - OECD 202 Guideline)
LL_{50} (96 h), fish: 6.7 mg/L (QSAR result - OECD 203 Guideline)
EL_{50} (72 h), algae: 3.0 mg/L (based on growth rate - QSAR result - OECD 201 Guideline)
· **Toxicity to aquatic microorganisms:**
Sewage containing the substance can be treated by a municipal sewage treatment plant (taking into account the PNEC STEP given in section 8).
NOEC ≥ 2 mg/L (nominal concentration - OECD 301 D)
· **12.2 Persistence and degradability**
The substance is readily biodegradable.

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Degradation after 28 days: 87% (O_2 consumption - OECD 301 D test - river water sampled near a domestic wastewater treatment plant).

· **12.3 Bioaccumulative potential** No experimental data available.
· **12.4 Mobility in soil** No experimental data available.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:**
According to Annex XIII of REACH Regulation, the substance is not considered to be Persistent, Bioaccumulative and Toxic.
· **vPvB:**
According to Annex XIII of REACH Regulation, the substance is not considered to be very Persistent and very Bioaccumulative.
· **12.6 Endocrine disrupting properties**
The substance is not included in the list established in accordance with Article 59(1) of REACH regulation for having endocrine disrupting properties, and is not a substance identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/210056 or Commission Regulation (EU) 2018/605.
· **12.7 Other adverse effects** No data available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods** National and regional regulations have to be adhered to.
· **Recommendation:** The product has to be disposed of in an authorised incinerator, according to regulation.
· **Uncleaned packaging**
· **Recommendation:** Packaging has to be sent to an authorised waste treatment facility, for recycling or disposal.

SECTION 14: Transport information

· **14.1 UN number or ID number**
· **ADR, IMDG, IATA** UN 2319

· **14.2 UN proper shipping name**
· **ADR** 2319 TERPENE HYDROCARBONS, N.O.S., ENVIRONMENTALLY HAZARDOUS
· **IMDG** TERPENE HYDROCARBONS, N.O.S. (dipentene), MARINE POLLUTANT
· **IATA** TERPENE HYDROCARBONS, N.O.S.

· **14.3 Transport hazard class(es)**

· **ADR, IMDG**

· **Class** 3 Flammable liquids.
· **Label** 3
· **IATA**

· **Class** 3 Flammable liquids.
· **Label** 3

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· **14.4 Packing group**	
· **ADR, IMDG, IATA**	III
· **14.5 Environmental hazards**	Environmentally hazardous substance, liquid; Marine Pollutant
· **Marine pollutant:**	Symbol (fish and tree)
· **Special marking (ADR):**	Symbol (fish and tree)
· **14.6 Special precautions for user**	Warning: Flammable liquids
· **Danger code:**	30
· **EMS Number:**	F-E,S-D
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable
· **Transport/Additional information:**	
· **ADR**	
· **Tunnel restriction code**	D/E
· **Classification code (letter/figure)**	F1
· **UN "Model Regulation"**	UN 2319, TERPENE HYDROCARBONS, N.O.S. (dipentene), ENVIRONMENTALLY HAZARDOUS, 3, III

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
Regulation (EC) No 1907/2006 (REACH):
The product does not contain any of the substances included in the following lists
- Annex XIV (authorisation) / substances of very high concern (SVHC)
- Annex XVII (restrictions)
Directive 2012/18/EU:
Product fulfilling the criteria of hazard categories:
- P5c "Flammable liquids, category 3 (H226)",
- E2 "Hazardous to the Aquatic Environment in Category Chronic 2 (H411)".

· **15.2 Chemical safety assessment** A Chemical Safety Assessment has been carried out.

SECTION 16: Other information

Information provided in this safety data sheet is based on our experience and present knowledge. It is a description of safety requirements and data given on the product and cannot be considered as specifications. They shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Version** 14.0
· **Previous version:** 13.0 of 18/07/2022

· **Emergency telephone numbers (other countries):**
NCEC - In-Country Numbers (24/24 - 7/7)
Australia: +61 2 8014 4558 / 18000 74234
Bangladesh: +65 3158 1200
China: 400 120 6011
China (Mainland): +86 532 8388 9090
Czech Republic: +420 228 882 830
Denmark: +45 8988 2286
Finland: +358 9 7479 0199
Greece: +30 21 1198 3182
India: +65 3158 1198
India: 000 800 100 7479
Indonesia: 007 803 011 0293
Japan: +81 3 4578 9341

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Safety data sheet
according to Article 31 of Regulation No 1907/2006/EC (REACH)

Printing date: 02.01.2023 Version number: 14.0 Revision date: 02.01.2023

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Malaysia: +60 3 6207 4347
New Zealand: +64 9 929 1483 / 0800 446 881
Norway: +47 2103 4452
Pakistan: +65 3158 1329
Philippines: +63 2 8231 2149
Singapore: +65 3165 2217
South Africa: +27 21 300 2732
South Korea: +82 2 3479 8401
Sri Lanka: +65 3158 1195
Sweden: +46 8 566 42573
Taiwan: +886 2 8793 3212
Thailand: 001 800 120 666 751
Turkey: +90 212 375 5231
Vietnam: +84 28 4458 2388

· **Full text of H and EUH mentions indicated in sections 2 and 3:**
H226: Flammable liquid and vapour
H228: Flammable solid
H302: Harmful if swallowed
H304: May be fatal if swallowed and enters airways
H315: Causes skin irritation
H317: May cause an allergic skin reaction
H331: Toxic if inhaled
H361f: Suspected of damaging fertility.
H400: Very toxic to aquatic life
H410: Very toxic to aquatic life with long lasting effects
H411: Toxic to aquatic life with long lasting effects

· **Abbreviations and acronyms:**
CLP: Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging
LD_{50}: Lethal dose for 50% of animals exposed by oral or dermal route
EC_{50}: Concentration which causes effects to 50% of the tested organisms (daphnids)
EL_{50}: Loading rate which causes effects to 50% of the tested organisms (daphnids)
LL_{50}: Median lethal loading rate (lethal level for 50% of fish exposed)
NOAEL: No Observed Adverse Effect Level
NOEC: No Observed Effect Concentration
OECD: Guidelines from the Organisation for Economic Co-operation and Development
LLNA: Local Lymph Node Assay
PBT: Persistent, Bioaccumulative and Toxic substance
vPvB: very Persistent and very Bioaccumulative substance
SVHC: Substances of Very High Concern
Flam. Liq. 3: Flammable liquids, Category 3
Skin Irrit. 2: Skin corrosion/irritation, Category 2
Skin Sens. 1B: Skin sensitisation, Category 1B
Asp. Tox. 1: Aspiration hazard, Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

· **Sources:**
Literature and company data
REACH dossier data

· **Modified data compared to the previous version:**
Change of emergency response service: National Chemical Emergency Centre (NCEC) (sections 1 and 16)

· **Annex:**
on request at the following address, fds@drt.fr

End of the safety data sheet

DE