

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

Printing date: 19.12.2024

Version number: 15.0

Revision date: 19.12.2024

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

· 1.1 Product identifier

· **Trade name:** DIPENTENE 10

· **Product number:** 939251

· **Substance name:** hydrocarbons, terpene processing by-products

· **CAS number:** 68956-56-9

· **EINECS number:** 273-309-3

· **REACH Registration number:** 01-2119980606-28-0000

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

Relevant identified uses: production and distribution of the product, intermediate, industrial formulation, fragrance product, solvent, formulation and use of coatings, inks, strippers, lubricants.

· 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: drt fds@dsm-firmenich.com

· 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

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Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye 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).

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.

H319 Causes serious eye 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.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.

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

Additional information: The product contains dipentene (CAS 138-86-3).

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.

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SECTION 3: Composition/information on ingredients

· 3.1 Substances

UVCB (substance of unknown or variable composition, complex reaction products or biological materials)

· Identification number(s)

· **CAS number:** 68956-56-9

· **EINECS number:** 273-309-3

· Description:

This is a distillation fraction obtained from terpene processing, mainly composed of hydrocarbons (terpinolene, camphene, alpha-terpinene, alpha-pinene, dipentene, gamma-terpinene, paracymene, isoterpinolene,...) ; cineols (1,4-cineole and 1,8-cineole) and terpene alcohols (alpha-terpineol, gamma-terpineol,...) are also present.

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 (CO₂)

· 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.

· Additional information:

Cool endangered receptacles with water spray.

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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

If possible, store the drums or ecobulk under shelter in a cool and well ventilated place.

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.

· 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:

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)

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Switzerland: limit value - short term = 224 mg/m³ (40 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)

Spain: limit value - 8 hours = 113 mg/m³ (20 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)
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)

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)

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)

Spain: limit value - 8 hours = 168 mg/m³ (30 ppm)

Switzerland: limit value - 8 hours = 40 mg/m³ (7 ppm)

Switzerland: limit value - short term = 80 mg/m³ (14 ppm)

· DNELs

· DNEL (Derived No-Effect Level): Workers - Long-term exposure

Systemic effects - inhalation: 2.9 mg/m³

Systemic effects - dermal: 0.8 mg/kg body weight/day

· DNEL (Derived No-Effect Level): General population - Long-term exposure

Systemic effects - inhalation: 0.7 mg/m³

Systemic effects - dermal: 0.3 mg/kg body weight/day

Systemic effects - oral: 0.3 mg/kg body weight/day

· PNECs

· PNEC (Predicted No-Effect Concentration) aqua (freshwater): 2.1 µg/L

· PNEC (Predicted No-Effect Concentration) aqua (marine water): 0.21 µg/L

· PNEC (Predicted No-Effect Concentration) Sewage Treatment Plant: 6.4 mg/L

· PNEC (Predicted No-Effect Concentration) sediment (freshwater): 0.542 mg/kg sediment dry weight

· PNEC (Predicted No-Effect Concentration) sediment (marine water): 54.2 µg/kg sediment dry weight

· PNEC (Predicted No-Effect Concentration) soil: 110 µg/kg soil dry weight

· PNEC (Predicted No-Effect Concentration) oral: 13.1 mg/kg food

· PNEC (Predicted No-Effect Concentration) aqua (intermittent releases): 21 µg/L

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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 qualifying 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:

Pine

· Odour threshold:

Not determined

· Change in condition
· Melting/freezing point:

< -80°C [OECD 102 / Regulation (EC) No. 440/2008 / EU A1 test]

· Boiling point or boiling range:

173°C [OECD 103 / Regulation (EC) No. 440/2008 / EU A2 test / Siwoloboff method]

The substance is ignitable

· Flammability:
· Lower and upper explosion limits

No data available

· Lower:

No data available

· Upper:

44°C [Regulation (EC) No. 440/2008 / EU A9 test / equilibrium method - closed cup]

· Flash point:

233°C [Regulation (EC) No. 440/2008 / EU A15 test / spontaneous inflammation temperature of liquids and gases]

· Auto-ignition temperature:

Not determined

· Decomposition temperature:

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· pH value:	Not applicable
· Viscosity	
· Kinematic viscosity:	< 7 mm ² /s [OECD 114 / capillary rotational viscometer method]
· Dynamic viscosity:	1,25 - 2,61 mPa.s (20 °C) [OECD 114 / forced ball viscometer method (dynamic)] 0.93 - 1.65 mPa.s (40°C) [OECD 114 / forced ball viscometer method (dynamic)]
· Solubility in water:	Values based on water solubility of alpha-pinene: 2.75 mg/L (20°C) [OECD 105 and 123 / slow-stirring method - columnelution method]
· Partition coefficient (n-octanol/water):	Values based on log Kow of alpha-pinene: log Kow = 4,46 (20 °C) [OECD 117 / HPLC method]
· Vapour pressure:	Values based on vapour pressure of alpha-pinene: 690 Pa (20°C) [OECD 104 / Regulation (EC) No. 440/2008 / EU A4 test / static method]
· Density and/or relative density	
· Relative density:	0,875 - 0,892 (20 °C) [OECD 109 / Regulation (EC) No. 440/2008 / EU A3 test / oscillating densitimeter]
· Vapour density:	Not determined
· Explosive properties:	The components of the substance do not contain any chemical groups associated with explosive properties
· Oxidising properties:	The components of the substance do not contain any chemical groups associated with explosive properties
· 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** Keep away from any flame or source of sparks.
- **10.5 Incompatible materials** Oxidizing agents, strong acids and strong bases.
- **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.

- **LD₅₀/LC₅₀ values relevant for classification:**

CAS: 68956-56-9 hydrocarbons, terpene processing by-products

Oral	LD ₅₀	> 2 000 mg/kg (rat) (OECD 401)
Dermal	LD ₅₀	> 2 000 mg/kg (rat) (OECD 402)

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· Skin corrosion/irritation:

The substance was found skin irritant (category 2) in a skin irritation study conducted on rabbit according to a method similar to OECD 404 Guideline.

· Serious eye damage/irritation:

The substance is classified as eye irritant (category 2) based on available data on one of its constituent and on another substance containing common constituents:

- camphene induced irritant effects in an eye irritation study conducted on rabbit, according to OECD 405 Guideline;
- a substance containing terpinolene, 1,4-cineole, 1,8-cineole and dipentene was found irritant in an in vitro eye irritation study on a human reconstructed corneal epithelium model.

· Skin sensitisation:

The substance is classified as skin sensitiser (category 1B) based on available data on one of its constituent and on another substance containing common constituents: skin sensitisation effects were observed in the murine Local Lymph Node Assay (LLNA - OECD 429 Guideline) conducted with terpinolene and with a substance containing terpinolene, 1,4-cineole, 1,8-cineole and dipentene.

· Mutagenicity/genotoxicity:

Results of tests conducted with the substance showed that it has no genotoxic potential:

- the substance was not mutagenic in bacteria in an Ames test (OECD 471 Guideline);
- the substance was not mutagenic in a gene mutation test in mouse lymphoma L5178Y cells (OECD 476 Guideline);
- no genotoxic effects were observed in a chromosome aberration test in human lymphocytes (OECD 473 Guideline), except after exposing cells for 20 hours without metabolic activation S9. The toxicological significance of this observation was considered questionable. Therefore, an in vitro micronucleus test (OECD 487 Guideline) was performed under similar experimental conditions (20h-exposure without metabolic activation, human lymphocytes).

No biologically relevant increases in micronuclei were observed.

· Carcinogenicity:

The substance is not expected to be carcinogenic: no mutagenic effects were observed with the substance itself and a repeated dose toxicity study conducted on rats with another substance containing terpinolene, 1,4-cineole, 1,8- cineole and dipentene did not demonstrate any hyperplasia signs or pre-neoplastic lesions.

· Reproductive toxicity:

Data are available on two constituents of the substance (alpha-pinene and camphene) and on another substance containing common constituents (terpinolene, 1,4-cineole, 1,8-cineole and dipentene). Based on this information, no toxic effects for reproduction are expected from the substance itself:

- a combined repeated dose and reproduction/developmental screening test was conducted on rat by oral route, according to OECD 422 Guideline, with a substance containing terpinolene, 1,4-cineole, 1,8-cineole and dipentene. No effects were observed on reproductive performance, gestation parameters, pup survival and development; NOAEL (No Observed Adverse Effect Level) - systemic toxicity for males and females (P) = 435.8 mg/kg body weight/day (higher dose tested)

NOAEL - reproduction and developmental toxicity = 435.8 mg/kg body weight/day (higher dose tested)

- no effects were observed on reproductive organs, in 90-day inhalation repeated toxicity studies conducted with alpha-pinene on rats and mice;
- no effects on development were observed at maternal non-toxic doses, in an oral study conducted on rat with camphene (according to OECD 414 Guideline).

· Specific target organ toxicity - single exposure:

No specific target organ toxicity was observed in the LD₅₀ determination studies.

· Specific target organ toxicity - repeated exposure:

Data are available on two constituents of the substance (alpha-pinene and camphene) and on another substance containing common constituents (terpinolene, 1,4-cineole, 1,8-cineole and dipentene). Based on this information, no classification is needed for the substance:

- a combined repeated dose and reproduction/developmental screening test was conducted on rat, according to OECD 422 Guideline, with a substance containing terpinolene, 1,4-cineole, 1,8-cineole and dipentene. Daily administration of the substance by diet for 42 days, at dose levels up to 435.8 mg/kg body weight/day, was well tolerated. Effects only considered as adaptative or specific for male rats were observed;

NOAEL = 435.8 mg/kg body weight/day (maximal tested dose)

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- a 90-day repeated dose toxicity study was conducted by inhalation with alpha-pinene;
NOAEC (mice): 283.24 mg/m³ - based on moderated hyperplasia of the transitional epithelium of the urinary bladder - a 28-day repeated dose toxicity study was conducted on rats, according to OECD 407 Guideline with camphene.
Daily administration of the substance by gavage, at dose levels up to 1 000 mg/kg body weight/day was generally well tolerated.

NOAEL = 250 mg/kg body weight/day - based on absolute and relative weights increase

· **Aspiration hazard:** If swallowed accidentally, the product may enter the respiratory tract due to its low viscosity.

· **Additional toxicological information:**

· **CMR effects (carcinogenicity, 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

Reliable short-term aquatic toxicity values have been determined in tests conducted with water-accommodated fractions (WAFs). This method was developed for slightly soluble substances; the initial loading rate of the substance is well higher than the solubility in water. LL₅₀ and EL₅₀, similar to LC₅₀ and EC₅₀, are obtained.

LL₅₀ (96 h), fish (Danio rerio): 5.07 mg/L (nominal concentration - OECD 203 Guideline)

EL₅₀ (48 h), daphnia (Daphnia magna): 2.10 and 2.70 mg/L (nominal concentration - OECD 202 Guideline - two batches tested)

EL₅₀ (72 h), algae (Pseudokirchnerella subcapitata): 4.78 mg/L (based on growth rate - nominal concentration - OECD 201 Guideline)

EL₅₀ (72 h), algae (Pseudokirchnerella subcapitata): 3.08 mg/L (based on yield - nominal concentration - OECD 201 Guideline)

These results lead to classify the substance for its toxicity to aquatic life (hazard to the aquatic environment - category 2).

· **Toxicity to aquatic microorganisms:**

Sewage containing the substance can thus be treated by a municipal sewage treatment plant (taking into account the PNEC sewage treatment plant given in section 8).

An acute aquatic toxicity study was performed according to OECD 209 Guideline to assess the effects of two different batches of the substance. The microbial source was an activated sludge of a predominantly domestic sewage.

EC₅₀ (3 h), bacteria (activated sludge of a predominantly domestic sewage): 365 and 579 mg/L (respiration rate - nominal concentration - two batches tested - OECD 209 Guideline)

· **12.2 Persistence and degradability**

The substance is readily biodegradable.

Degradation after 28 days: 81 - 83% (oxygen consumption - OECD 301 D Guideline - activated sludge of a domestic sewage, non-adapted).

· **12.3 Bioaccumulative potential**

No measured data are available for the individual constituents of the substance. Based on partition coefficients noanol/water determined for the main constituents, an accumulation in organisms is not expected.

· **12.4 Mobility in soil** No experimental data available.

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- **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. (hydrocarbons, terpene processing by-products), MARINE POLLUTANT
 · IATA TERPENE HYDROCARBONS, N.O.S.

- **14.3 Transport hazard class(es)**

· ADR, IMDG



· **Class**

· **Label**

· **IATA**

3 Flammable liquids.

3



· **Class**

3 Flammable liquids.

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· Label	3
· 14.4 Packing group · ADR, IMDG, IATA	III
· 14.5 Environmental hazards · Marine pollutant: · Special marking (ADR):	Environmentally hazardous substance, liquid; Marine Pollutant Symbol (fish and tree) Symbol (fish and tree)
· 14.6 Special precautions for user · Danger code: · EMS Number:	Warning: Flammable liquids 30 F-E,S-D
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable
· Transport/Additional information:	
· ADR · Tunnel restriction code · Classification code (letter/figure)	D/E F1
· UN "Model Regulation"	UN 2319, TERPENE HYDROCARBONS, N.O.S. (hydrocarbons, terpene processing by-products), 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:** 15.0
- **Previous version:** 14.1 of 27/09/2023
- **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

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Safety data sheet

according to 1907/2006/EC, Article 31

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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
 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
 H304: May be fatal if swallowed and enters airways
 H315: Causes skin irritation
 H317: May cause an allergic skin reaction
 H319: Causes serious eye irritation
 H411: Toxic to aquatic life with long lasting effects

· Abbreviations and acronyms:

CLP: Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging
 LD₅₀: Lethal dose for 50% of animals exposed by oral or dermal route
 EC₅₀: Concentration which leads to a 50% reduction in treated organism responses compared to untreated organism responses (algae) or concentration which causes effects to 50% of the tested organisms (daphnids)
 LC₅₀: Lethal concentration for 50% of exposed animals
 EL₅₀: Loading rate which leads to a 50 % reduction in treated organisms responses compared to untreated organism responses (algae) or loading rate which causes effects to 50 % of the tested organisms (daphnids)
 LL₅₀: Median lethal loading rate (lethal level for 50% of fish exposed)
 LLNA: Local Lymph Node Assay
 NOAEC: No Observed Adverse Effect Concentration
 NOAEL: No Observed Adverse Effect Level
 OECD: Guidelines from the Organisation for Economic Co-operation and Development
 SVHC: Substances of Very High Concern
 PBT: Persistent, Bioaccumulative and Toxic substance
 vPvB: very Persistent and very Bioaccumulative substance
 Flam. Liq. 3: Flammable liquids, Category 3
 Skin Irrit. 2: Skin corrosion/irritation, Category 2
 Eye Irrit. 2: Serious eye damage/eye 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

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

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REACH dossier data

· **Modified data compared to the previous version:**

Change of status from mixture to substance

Change in section 1

Change in section 3

Change in section 8

Change in section 9

Change in section 11

Change in section 12

Change in the proper shipping name (section 14)

· **Annex:**

on request at the following address, drt.fds@dsm-firmenich.com

End of the safety data sheet

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