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

13 rue Louis Blériot
77290 COMPANS

Printing date: 05.11.2024 Version number: 16.0 Revision date: 05.11.2024

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

· **1.1 Product identifier** HUILE DE PIN 90%
· **Trade name: DERTOL™ 90**
· **Product number:** 937357
· **Common substance name:** Terpineol multiconstituent
· **Substance name according to REACH identification requirements:**
Reaction mass of α,α-4-trimethyl-(1S)-3-cyclohexene-1-methanol and α,α-4-trimethyl-(1R)-3-cyclohexene-1-methanol and 1-methyl-4-(1-methylethylidene)-cyclohexanol
· **Common CAS Number:** 8000-41-7
· **EC number:** 701-188-3
· **REACH Registration number:** 01-2119553062-49-0000

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
Relevant identified uses: production and distribution of the substance, intermediate, industrial formulation, solvent, formulation and use of coatings, inks, strippers, lubricants, welding and soldering products, flotation agents, mining chemicals, metal working fluids, rolling oils and agrochemicals.

· **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:**


GHS07 exclamation mark

Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.

· **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:**


GHS07

· **Signal word:** Warning
· **Hazard statements:**
H315 Causes skin irritation.

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H319 Causes serious eye irritation.

· **Precautionary statements:**

P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
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.
P332+P313	If skin irritation occurs: Get medical advice/attention.
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:** Contains dipentene. May produce an allergic reaction.

· **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 the identification rules of REACH, this product is a multiconstituent substance, consisting of the following constituents:
- (-) alpha-terpineol [α,α-4-trimethyl-(1S)-3-cyclohexene-1-methanol - CAS 10482-56-1]
- (+) alpha-terpineol [α,α-4-trimethyl-(1R)-3-cyclohexene-1-methanol - CAS 7785-53-7]
- gamma-terpineol [1-methyl-4-(1-methylethylidene)-cyclohexanol - CAS 586-81-2]

According to REACH, the constituents of a multiconstituent substance are, by definition, present at more than 10%. Components present at less than 10% are considered as impurities.
Main impurities:
- cis beta-terpineol [cis-1-methyl-4-(1-methylethenyl)-cyclohexanol - CAS 7299-41-4]
- 3-terpinen-1-ol [4-isopropyl-1-methylcyclohex-3-en-1-ol - CAS 586-82-3]
- terpinolene [4-isopropylidene-1-methylcyclohexene - CAS 586-62-9]
- trans beta-terpineol [trans-1-methyl-4-(1-methylethenyl)-cyclohexanol - CAS 7299-40-3]
- 1-terpinen-4-ol [1-isopropyl-4-methylcyclohex-3-en-1-ol - CAS 562-74-3]
- delta-terpineol [α,α-dimethyl-4-methylene cyclohexanemethanol - CAS 7299-42-5]
- dipentene [4-isopropenyl-1-methylcyclohexene - CAS 138-86-3]
- paracymene [1-isopropyl-4-methylbenzene - CAS 99-87-6]

"Substance terpineol multiconstituent" (constituents + impurities) forms - according to the definition of a substance under REACH - 100% of the product.

· **Identification number(s)**

· **Common CAS Number:** 8000-41-7

· **EC number:** 701-188-3

· **Description:**
Reaction mass of (-) alpha-terpineol (p-menth-1-ene-8-ol - CAS 10482-56-1) and (+) alpha-terpineol [(R)-α,α-4-trimethylcyclohex-3-ene-1-methanol - CAS 7785-53-7] and gamma-terpineol [1-methyl-4-(1-methylethylidene) cyclohexane-1-ol - CAS 586-81-2]

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· **Impurities and stabilising additives (classified as hazardous):**	
CAS: 586-62-9 EINECS: 209-578-0	terpinolene Asp. Tox. 1, H304; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Sens. 1B, H317
CAS: 562-74-3 EINECS: 209-235-5	terpinen-1-ol-4 Acute Tox. 4, H302; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H336
CAS: 138-86-3 EINECS: 205-341-0	dipentene Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Acute 1, H400; Skin Irrit. 2, H315; Skin Sens. 1B, H317; Aquatic Chronic 3, H412
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

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 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** No data available.
· **4.3 Indication of any immediate medical attention and special treatment needed** No specific indications.

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.
· **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.
· **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.
· **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 from heat.
Keep ignition sources away.
· **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.
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:**
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)
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)

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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)
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)

· **DNELs**

· **DNEL (Derived No-Effect Level): Workers - Long-term exposure**
Systemic effects - inhalation: 44.8 mg/m³
Systemic effects - dermal: 6.36 mg/kg body weight/day

· **DNEL (Derived No-Effect Level): General population - Long-term exposure**
Systemic effects - inhalation: 7.96 mg/m³
Systemic effects - dermal: 2.69 mg/kg body weight/day
Systemic effects - oral: 2.69 mg/kg body weight/day

· **PNECs**

· **PNEC (Predicted No-Effect Concentration) aqua (freshwater):** 12 µg/L
· **PNEC (Predicted No-Effect Concentration) aqua (marine water):** 1.2 µg/L
· **PNEC (Predicted No-Effect Concentration) Sewage Treatment Plant:** 2.57 mg/L
· **PNEC (Predicted No-Effect Concentration) sediment (freshwater):** 0.263 mg/kg sediment dry weight
· **PNEC (Predicted No-Effect Concentration) sediment (marine water):** 0.0263 mg/kg sediment dry weight
· **PNEC (Predicted No-Effect Concentration) soil:** 0.0455 mg/kg soil dry weight
· **PNEC (Predicted No-Effect Concentration) oral:** 16.6 mg/kg food
· **PNEC (Predicted No-Effect Concentration) aqua (intermittent releases):** 120 µg/L

· **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).

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· **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:**	Turpentine-like
· **Odour threshold:**	Not determined
· **Change in condition**	
· **Melting/freezing point:**	-35.9 to -28.2°C [OECD 102 / Regulation (EC) No. 440/2008 / EU A1 test / capillary method]
· **Boiling point or boiling range:**	210°C [literature data]
· **Flammability:**	The substance is not ignitable
· **Lower and upper explosion limits**	
· **Lower:**	No data available
· **Upper:**	No data available
· **Flash point:**	88°C [Regulation (EC) No. 440/2008 / EU A9 test / equilibrium method (setaflash method - closed cup) / ≈ 1 atm]
· **Auto-ignition temperature:**	264°C [Regulation (EC) No. 440/2008 / EU A15 test / spontaneous inflammation temperature of liquids and gases / 98 kPa]
· **Decomposition temperature:**	Not determined
· **pH value:**	Not applicable
· **Viscosity**	
· **Kinematic viscosity:**	Not determined
· **Dynamic viscosity:**	60.9 mPa.s (20°C - constant shear rate 583.1 s^{-1}) [OECD 114 / capillary rotational viscometer method] 12.4 mPa.s (40°C - constant shear rate 583.1 s^{-1}) [OECD 114 / capillary rotational viscometer method]
· **Solubility**	
· **in water:**	2 847 mg/L (20°C) [OECD 105 / Regulation (EC) No. 440/2008 / EU A6 test / flask method / pH 4.7 - 5.0]
· **Partition coefficient (n-octanol/water):**	log Kow = 2.6 (30°C) [OECD 117 / HPLC method (Reverse Phase High Performance Liquid Chromatography)]
· **Vapour pressure:**	300 Pa (20°C) [OECD 104 / Regulation (EC) No. 440/2008 / EU A4 test / static method] 381 Pa (25°C) [OECD 104 / Regulation (EC) No. 440/2008 / EU A4 test / static method]
· **Density and/or relative density**	
· **Relative density:**	0.92 - 0.94 (20°C) [OECD 109 / Regulation (EC) No. 440/2008 / EU A3 test / oscillating densitimeter]

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· **Vapour density:**	Not determined
· **Explosive properties:**	The components of the substance do not contain any chemical groups associated with explosive properties The substance was not sensitive to heating or shock in a test carried out according to EU method A14
· **Oxidising properties:**	The components of the substance do not contain any chemical groups associated with explosive 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** Keep away from heat and sources of ignition.
· **10.5 Incompatible materials**
Strong acids
Strong oxidising agents
Materials that react with oxygenated terpenes
· **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:**		
CAS: 8000-41-7 terpineol multiconstituent		
Oral	LD_{50}	> 2 000 mg/kg (rat) (OECD 401)
Dermal	LD_{50}	> 2 000 mg/kg (rabbit) (OECD 402)
Inhalation	LC_{50} (4 h)	> 4.76 mg/L (rat) (OECD 403)

Note: no acute toxicity (either local or systemic) was identified at the highest dose tested by inhalation (4.76 mg/L). Oral and dermal LD_{50} are higher than 2 000 mg/kg. Therefore, no signs of acute toxicity are expected by inhalation at concentrations used for classification.

· **Skin corrosion/irritation:**
Terpineol multiconstituent and alpha-terpineol (main constituent) were found to be skin irritating (category 2), in several studies conducted on rabbits according to OECD 404 Guideline.
· **Serious eye damage/irritation:**
The substance was found to be eye irritating (category 2), in a study conducted on rabbits according to OECD 405 Guideline.
· **Skin sensitisation:**
The substance is not classified based on the following result: no skin sensitisation effects were observed in a Guinea Pig Maximisation Test (GPMT) conducted according to OECD 406 Guideline.
· **Mutagenicity/genotoxicity:**
Results of tests conducted with the substance and one of its main constituents show that it has no genotoxic potential:
- terpineol multiconstituent and alpha-terpineol were not mutagenic in several Ames tests (OECD 471 Guideline);
- no genotoxic effects were observed with the substance in a chromosome aberration test in human lymphocytes (OECD 473 Guideline);
- alpha-terpineol was not mutagenic in a gene mutation test on mouse lymphoma L5178Y cells (OECD 476

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Guideline).

· **Carcinogenicity:**
The substance is not expected to be carcinogenic: no mutagenic effects were observed with the substance and there is no evidence from the repeated dose toxicity studies that the substance is able to induce hyperplasia or pre-neoplastic lesions.

· **Reproductive toxicity:**
Based on findings from three studies conducted on rats, there is strong evidence that no reproductive effects are likely to occur by the possible routes of human exposure.
A prenatal developmental toxicity study was conducted according to OECD 414 Guideline. Administration of the substance by gavage to pregnant female rats at doses up to 600 mg/kg body weight/day did not induce effects considered as adverse on pup survival and development.
NOAEL (maternal toxicity) = 600 mg/kg body weight/day
NOAEL (enbryo-foetal toxicity) = 600 mg/kg body weight/day
No effects were observed on the reproductive organs in two 90-day repeated toxicity studies conducted on rat: by inhalation according to OECD 413 Guideline and by oral route.

· **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:**
Available data presented below do not lead to any classification of the substance.
In a repeated dose toxicity study, daily administration of terpineol multiconstituent by gavage for 5 weeks to male and female rats was generally well tolerated at dose levels up to 750 mg/kg body weight/day.
NOAEL = 250 mg/kg (testicles)
There is strong evidence that no effects will occur when animals are exposed through a route relevant for human exposure (diet) rather than gavage.
A 90-day repeated dose toxicity study was carried out by inhalation on rat, according to OECD 413 Guideline. Administration of the substance to male and unmated female rats, at dose levels up to 2.23 mg/L, was well tolerated and no effects were observed on the reproductive organes.
NOAEL = 2.23 mg/L

· **Aspiration hazard:** After swallowing, no entry into the respiratory tract is expected.

· **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 not classified because it is readily biodegradable and log Kow is less than 3.
LC_{50} (96 h), fish (Danio rerio): 62 - 80 mg/L (nominal concentration - OECD 203 Guideline)
NOEC (96 h), fish (Danio rerio): 62 mg/L (nominal concentration - OECD 203 Guideline)
LC_{50} (48 h), daphnia (Daphnia magna): 73 mg/L (nominal concentration - OECD 202 Guideline)
EC_{50} (48 h), daphnia (Daphnia magna): 73 mg/L (nominal concentration - OECD 202 Guideline)
NOEC (48 h) daphnia (Daphnia magna): 40 mg/L (based on mortality - nominal concentration - OECD 202 Guideline)
EC_{50} (72 h), algae (Pseudokirchneriella subcapitata): 68 mg/L (based on growth rate - nominal concentration - OECD 201 Guideline)
EC_{50} (72 h), algae (Pseudokirchneriella subcapitata): 17 mg/L (based on biomass - nominal concentration - OECD 201 Guideline)
NOEC (72 h), algae (Pseudokirchneriella subcapitata): 3.9 mg/L (growth and biomass - nominal concentration - OECD 201 Guideline)

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· **Terrestrial toxicity:**
LC_{50} (14 days), earthworm (Eisenia fetida): 499 - 799 mg/kg soil dry weight (based on mortality - nominal concentration - OECD 207 Guideline)
NOEC (14 days), earthworm (Eisenia fetida): 311 mg/kg soil dry weight (based on mortality - nominal concentration - OECD 207 Guideline)
NOEC (14 days), earthworm (Eisenia fetida): 311 mg/kg soil dry weight (based on growth - nominal concentration - OECD 207 Guideline)
· **12.2 Persistence and degradability**
Terpineol multiconstituent is readily biodegradable.
Degradation after 28 days: 80% (inorganic carbon concentration - OECD 310 Guideline - domestic activated sludge - 60% being surpassed within 10 days after reaching 10%).
· **12.3 Bioaccumulative potential**
No measured data are available for the substance. Based on estimations using 3 different QSARs (Quantitative Structure-Activity Relationship methods) and the value of the partition coefficient n-octanol/water less than 3, an accumulation in organisms is not expected.
· **12.4 Mobility in soil**
The adsorption coefficient of the substance was determined in a study conducted following the OECD 106 Guideline:
$28.8 \leq Koc \leq 50.9$
Taken with the high water solubility, this value is low enough to suggest that terpineol multiconstituent will show limited adsorption to soil or sediment particulates, and will partition mainly to water (in the surface or ground water compartments).
· **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**	Not classified as a dangerous good under transport regulation
· **14.2 UN proper shipping name**	Not classified as a dangerous good under transport regulation
· **14.3 Transport hazard class(es)**	Not applicable
· **14.4 Packing group**	Not applicable
· **14.5 Environmental hazards**	Not classified as a dangerous good under transport regulation

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· **14.6 Special precautions for user**	Not applicable
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable
· **UN "Model Regulation"**	-

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:
The product does not fulfill the criteria of the hazard categories listed in Annex I Part 1 and is not listed in Part 2.

· **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** 16.0
· **Previous version:** 15.1 of 27/10/2023

· **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
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

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

Printing date: 05.11.2024 Version number: 16.0 Revision date: 05.11.2024

Trade name: DERTOL™ 90

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· **Full text of H and EUH mentions indicated in sections 2 and 3:**
H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
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.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H336 May cause drowsiness or dizziness.
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.
H412 Harmful to aquatic life with long lasting effects.

· **Abbreviations and acronyms:**
CLP: Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging
EC_{50}: 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)
LC_{50}: Lethal concentration for 50% of exposed animals
LD_{50}: Lethal dose for 50% of animals exposed by oral or dermal route
Koc: Organic carbon/water partition coefficient. It represents the potential of retention of the substance on soil organic matter
NOAEL: No Observed Adverse Effect Level
NOEC: No Observed Effect Concentration
OECD: Guidelines from the Organisation for Economic Co-operation and Development
PBT: Persistent, Bioaccumulative and Toxic substance
vPvB: very Persistent and very Bioaccumulative substance
SVHC: Substances of Very High Concern
Skin Irrit. 2: Skin corrosion/irritation, Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

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

· **Modified data compared to the previous version:**
Identification of the product updated (section 1)
Change in the classification of some impurities (section 3)

· **Annex:**
on request at the following address, drt.fds@dsm-firmenich.com

End of the safety data sheet