

Nerolidol**5000394**

Version 6.2

Revision Date 16.09.2024

Date of last issue: 24.01.2023

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Trade name : Nerolidol

Substance name : 3,7,11-trimethyldodeca-1,6,10-trien-3-ol, mixed isomers

REACH Registration Number : 01-2119457636-29-0001

CAS-No. : 7212-44-4

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

Use of the Sub- : Ingredient for fragrances, Ingredient for flavours
stance/Mixture

1.3 Details of the supplier of the safety data sheet

Company : DSM Nutritional Products (UK) Ltd.
Heanor Gate
αGB061001
Delves Road
DE75 7SG Heanor

Telephone : +441773536500

Telefax : +441773536600

E-mail address of person : sds.nutritionalproducts@dsm.com
responsible for the SDS

1.4 Emergency telephone number

+44 1865 407333

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

Classification (REGULATION (EC) No 1272/2008) as amended by The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019)

Eye irritation, Category 2	H319: Causes serious eye irritation.
Skin sensitisation, Sub-category 1B	H317: May cause an allergic skin reaction.
Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 1	H410: Very toxic to aquatic life with long lasting effects.

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2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008) as amended by The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019)

Hazard pictograms



Signal word

: Warning

Hazard statements

: H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

: **Prevention:**

P261 Avoid breathing mist or vapours.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P391 Collect spillage.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

Synonyms

: 1,6,10-Dodecatrien-3-ol, 3,7,11-trimethyl-NL

Brief description of the product

: Mixture of isomers

Formula

: C₁₅ H₂₆ O

CAS-No.

: 7212-44-4

3.1 Substances

Hazardous components

Chemical name	CAS-No. EC-No.	Concentration (% w/w)
3,7,11-trimethyldodeca-1,6,10-trien-3-ol,mixed isomers	7212-44-4 230-597-5	>= 90 - <= 100

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SECTION 4: First aid measures**4.1 Description of first aid measures**

- | | | |
|-------------------------|---|---|
| General advice | : | Move out of dangerous area.
Show this safety data sheet to the doctor in attendance. |
| If inhaled | : | Move to fresh air.
Consult a physician after significant exposure. |
| In case of skin contact | : | Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
If symptoms persist, call a physician. |
| In case of eye contact | : | Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist. |
| If swallowed | : | Rinse mouth with water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
Obtain medical attention. |

4.2 Most important symptoms and effects, both acute and delayed

- | | | |
|-------|---|--|
| Risks | : | May cause an allergic skin reaction.
Causes serious eye irritation. |
|-------|---|--|

4.3 Indication of any immediate medical attention and special treatment needed

- | | | |
|-----------|---|------------------------|
| Treatment | : | Treat symptomatically. |
|-----------|---|------------------------|

SECTION 5: Firefighting measures**5.1 Extinguishing media**

- | | | |
|--------------------------------|---|---|
| Suitable extinguishing media | : | Alcohol-resistant foam
Dry chemical
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable extinguishing media | : | High volume water jet |

5.2 Special hazards arising from the substance or mixture

- | | | |
|---------------------------------------|---|---|
| Specific hazards during fire-fighting | : | Do not allow run-off from fire fighting to enter drains or water courses. |
|---------------------------------------|---|---|

5.3 Advice for firefighters

- | | | |
|---|---|--|
| Special protective equipment for firefighters | : | In the event of fire, wear self-contained breathing apparatus. |
| Further information | : | Collect contaminated fire extinguishing water separately. This |

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must not be discharged into drains.

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Personal precautions : Use personal protective equipment.
Ensure adequate ventilation.

6.2 Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For personal protection see section 8., For disposal considerations see section 13.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Advice on safe handling : Avoid contact with skin and eyes.
Ensure adequate ventilation, especially in confined areas.
For personal protection see section 8.
Dispose of rinse water in accordance with local and national regulations.
Smoking, eating and drinking should be prohibited in the application area.

Avoid contact with skin and eyes.
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Dispose of rinse water in accordance with local and national regulations.
Smoking, eating and drinking should be prohibited in the application area.

Advice on protection against fire and explosion : Take necessary action to avoid static electricity discharge.
Product will burn under fire conditions.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of work-day.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : To maintain product quality, do not store in heat or direct sunlight.

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Keep container tightly closed and dry. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)

Specific use(s) : Not applicable

SECTION 8: Exposure controls/personal protection**8.1 Control parameters**

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
1,6,10-Dodecatrien-3-ol, 3,7,11-trimethyl-	Workers	Skin contact	Local effects	0.122 mg/cm2

8.2 Exposure controls**Personal protective equipment**

Eye protection : Safety glasses with side-shields

Hand protection

Material : Nitrile rubber

Break through time : 480 min

Glove thickness : 0.4 mm

Viton®

480 min

0.7 mm

: Consider the hazard characteristics of this product and any special workplace conditions when selecting the appropriate type of protective gloves.

Glove material: for example nitrile rubber

Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.
Wear respiratory protection when its use is identified for certain contributing scenario.

In the case of vapour formation use a respirator with an approved filter.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

Appearance : clear liquid

Colour : colourless - light yellow

Odour : floral

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Odour Threshold	: No information available.
pH	: No data available
Melting point/range	: -90 °C
Boiling point/boiling range	: 267 °C (1,013 hPa)
Flash point	: 105 °C (1,013 hPa, closed cup, ISO 2719)
Evaporation rate	: not determined
Vapour pressure	: 0.0024 hPa (20 °C)
Relative vapour density	: not determined
Density	: 0.872 - 0.876 g/cm ³ (20 °C)
Water solubility	: 14.1 mg/l (20 °C) practically insoluble
Solubility in other solvents	: various organic solvents: soluble
Partition coefficient: n-octanol/water	: log Pow 4.5 (24 °C)
Ignition temperature	: 240 °C (1,006 hPa, DIN 51794)
Thermal decomposition	: Decomposes on heating. Potential for exothermic hazard
Viscosity, dynamic	: 13.8 mPa.s (20 °C)
Viscosity, kinematic	: not determined
Explosive properties	: Not explosive
Oxidizing properties	: Not oxidizing

9.2 Other information

Refractive index	: 1.478 - 1.482
Molecular weight	: 222.37 g/mol
Surface tension	: 28.8 mN/m

SECTION 10: Stability and reactivity

10.1 Reactivity

No hazards to be specially mentioned.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions	: Possible incompatibility with materials listed under section 10.5.
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10.4 Conditions to avoid

Conditions to avoid	: Heat
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10.5 Incompatible materials

Materials to avoid	: Strong acids and strong bases Strong oxidizing agents
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10.6 Hazardous decomposition products

Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

SECTION 11: Toxicological information**11.1 Information on toxicological effects**

Acute oral toxicity	: LD50 (Mouse): > 8,000 mg/kg : LD50 (Rat, male and female): > 2,610 mg/kg Test performed using a similar product. (OECD Test Guideline 401)
Acute dermal toxicity	: LD50 (Rabbit): > 5,000 mg/kg
Skin irritation	: Mild skin irritation (Rabbit, OECD Test Guideline 404) Test performed using a similar product. : Prolonged skin contact may cause skin irritation.
Eye irritation	: Mild eye irritation (Rabbit, OECD Test Guideline 405) Test performed using a similar product.
Sensitisation	: The product is a skin sensitizer, sub-category 1B. (Mouse, Local Lymph Node Assay (LLNA), OECD Test Guideline 429)
Genotoxicity in vitro	: not mutagenic (Ames test, OECD Test Guideline 471)
Genotoxicity in vivo	: not genotoxic (Mouse, Oral, Mutagenicity (micronucleus test)) Test performed using a similar product.
Carcinogenicity	: No indication for carcinogenicity known.
Reproductive toxicity	: NOAEL: > 700 mg/kg bw/d (Rat, Oral, OECD Test Guideline 422)
Teratogenicity	: NOAEL: >= 270 mg/kg bw/d (Rat, Oral, OECD Test Guideline 422)
STOT - single exposure (Acute exposure)	: The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT - repeated exposure	: NOAEL (Oral, Rat) : 100 mg/kg bw/d Subacute toxicity (OECD Test Guideline 422)
Aspiration toxicity	: No aspiration toxicity classification

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Endocrine disrupting properties**Product:**

Assessment : This substance/mixture does not contain components considered to have endocrine disrupting properties for human health according to UK REACH Article 57(f),

SECTION 12: Ecological information**12.1 Toxicity**

Toxicity to fish : Pimephales promelas (fathead minnow)
LC50 (96 h) 1.43 mg/l
(nominal concentration)

Toxicity to daphnia and other aquatic invertebrates : Daphnia magna (Water flea)
EC50 (48 h) 0.51 mg/l
(nominal concentration)
(EG 84/449)

Toxicity to algae : Desmodesmus subspicatus (green algae)
ErC50 (72 h) 2 mg/l
(nominal concentration)
(OECD Test Guideline 201)

Toxicity to bacteria : activated sludge
EC50 (0.5 h) > 1,000 mg/l
(nominal concentration)
(OECD Test Guideline 209)

12.2 Persistence and degradability

Biodegradability : Readily biodegradable.
70 - 80 % (28 d)
(OECD Test Guideline 301F)

Photodegradation : Half-life (direct photolysis): 1.84 h (calculated value) (25 °C)

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water : log Pow 4.5 (24 °C)

12.4 Mobility in soil

Distribution among environmental compartments : Adsorption/Soil
log Koc 3.12 (calculated value)

Surface tension : 28.8 mN/m

12.5 Results of PBT and vPvB assessment

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or

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higher.

12.6 Other adverse effects**Product:**

Endocrine disrupting potential : This substance/mixture does not contain components considered to have endocrine disrupting properties for environment according to UK REAC Article 57(f),

Additional ecological information : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SECTION 13: Disposal considerations**13.1 Waste treatment methods**

Product : Discharge into the environment must be avoided.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Do not dispose of waste into sewer.
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging : Dispose of as unused product.
Do not re-use empty containers.

SECTION 14: Transport information**14.1 UN number**

ADR : UN 3082
RID : UN 3082
IMDG : UN 3082
IATA : UN 3082

14.2 UN proper shipping name

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Nerolidol)
RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Nerolidol)
IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Nerolidol)
IATA : Environmentally hazardous substance, liquid, n.o.s.
(Nerolidol)

14.3 Transport hazard class(es)

ADR : 9

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RID : 9
IMDG : 9
IATA : 9

14.4 Packing group

ADR

Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9
Tunnel restriction code : (-)

RID

Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9

IMDG

Packing group : III
Labels : 9
EmS Code : F-A, S-F

IATA (Cargo)

Packing instruction (cargo aircraft) : 964
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous

IATA (Passenger)

Packing instruction (passenger aircraft) : 964
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous

14.5 Environmental hazards

ADR

Environmentally hazardous : yes

RID

Environmentally hazardous : yes

IMDG

Marine pollutant : yes

IATA (Passenger)

Environmentally hazardous : yes

IATA (Cargo)

Environmentally hazardous : yes

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

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Remarks : Not applicable

SECTION 15: Regulatory information

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

Relevant EU provisions transposed through retained EU law

- UK REACH List of restrictions (Annex 17) : Conditions of restriction for the following entries should be considered:
Number on list 3
- GB Export and import of hazardous chemicals - Prior Informed Consent (PIC) Regulation : Not applicable
- Control of Major Accident Hazards Regulations E1 ENVIRONMENTAL HAZARDS
2015 (COMAH)
- Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
Not applicable

Other regulations:

The components of this product are reported in the following inventories:

- TCSI : On the inventory, or in compliance with the inventory
- TSCA : All substances listed as active on the TSCA inventory
- AIIC : On the inventory, or in compliance with the inventory
- DSL : All components of this product are on the Canadian DSL
- ENCS : On the inventory, or in compliance with the inventory
- ISHL : On the inventory, or in compliance with the inventory
- KECI : On the inventory, or in compliance with the inventory
- PICCS : On the inventory, or in compliance with the inventory
- IECSC : On the inventory, or in compliance with the inventory
- NZIoC : Not in compliance with the inventory
- TECI : On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by

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Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

DNEL - Derived No-Effect Level; NFPA - National Fire Protection Association (USA); PNEC - Predicted No-Effect Concentration; STEL - Short term exposure limit; TLV-C - Ceiling Limit Value; TWA - Time Weighted Average; WEL - Workplace Exposure Limit.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

GB / EN