GHS Safety Data Sheet

This Safety Data Sheet cancels and replaces all preceding SDS for this product.

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

970953
CLEARWOOD®
dsm-firmenich product

EU Specific Identifiers:
EC No: 939-227-3
EU REACH No: 01-2119967775-18
Reaction Mass of 1,4-dimethyl-7-(prop-1-en-2-yl)-1,2,3,4,5,6,7,8-octahydroazulene and 3,8-dimethyl-5-(prop-1-en-2-yl)-1,2,3,3a,4,5,6,7-octahydroazulene and 4,8a,9,9-tetramethyldecahydro-1,6-methanonaphthalen-1-ol

Other Identifiers:
CAS No: 1450625-49-6

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

Fragrance ingredient for use in consumer products.
Not for personal use in this form or concentration.
Intended to be used in the manufacture of products for consumers.

1.3 Details of the supplier of the safety data sheet

Firmenich Grasse SAS
Parc Industriel Les Bois de Grasse
106 Avenue Louison Bobet
06130 Grasse
FRANCE
Tel: +33 (0)4 93 70 80 80

P&B.RA.EU@dsm-firmenich.com

1.4 Emergency telephone number

+44 1235 239 670 Available 24/7 (NCEC)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Aspiration Hazard - Cat. 1	H304
Skin Sensitization - Cat. 1B	H317
Environmental Hazard (chronic) - Cat. 2	H411

Additional information
Full text of listed statements : See section 16

2.2 Label elements

Hazard pictograms:



Signal Word:
Danger

Hazard Statements:

H304	May be fatal if swallowed and enters airways.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

Precautionary Statements:

P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P405	Store locked up.

2.3 Other hazards

No data available at this time.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance

Natural product.

Contains :	**GHS Classification:**
>= 30.0 < 40.0% EU Specific Identifiers: EC CAS: 0005986-55-0 1,6-Methanonaphthalen-1(2h)-Ol, Octahydro-4,8a,9,9-Tetramethyl-, [1r-(1.Alpha.,4.Beta.,4a.Alpha.,6.Beta.,8a.Alpha.)]- N° EC: 227-807-2	Environmental Hazard (chronic) - Cat. 2 [H411]
>= 15.0 < 20.0% EU Specific Identifiers: Other Identifiers: Azulene, 1,2,3,4,5,6,7,8-Octahydro-1,4-Dimethyl-7-(1-Methylethenyl)-, [1s-(1.Alpha.,4.Alpha.,7.Alpha.)]- N° CAS: 0003691-12-1	Aspiration Hazard - Cat. 1 [H304] Skin Irritation - Cat. 2 [H315] Eye Irritation - Cat.2 [H319]
>= 10.0 < 15.0% EU Specific Identifiers: Other Identifiers: Azulene, 1,2,3,5,6,7,8,8a-Octahydro-1,4-Dimethyl-7-(1-Methylethenyl)-, (1s,7r,8as)- N° CAS: 0003691-11-0	Aspiration Hazard - Cat. 1 [H304]
>= 5.0 < 7.5% EU Specific Identifiers: EC CAS: 0000087-44-5 Caryophyllene N° EC: 201-746-1	Aspiration Hazard - Cat. 1 [H304] Skin Sensitization - Cat. 1B [H317]
>= 0.1 < 0.5% EU Specific Identifiers: EC CAS: 0004602-84-0 2,6,10-Dodecatrien-1-Ol, 3,7,11-Trimethyl- N° EC: 225-004-1	Skin Sensitization - Cat. 1B [H317] Skin Irritation - Cat. 2 [H315] Eye Irritation - Cat.2 [H319] Environmental Hazard (acute) - Cat. 1 [H400] Environmental Hazard (chronic) - Cat. 1 [H410]

SCL/M-factor/ATE:

EC CAS 0004602-84-0	M-factor (acute): 1 M-factor (chronic): 1

SECTION 4: FIRST-AID MEASURES

4.1 Description of first aid measures

General information:
As in all cases of potential poisoning, Obtain medical advice immediately.

In case of eye contact:
Irrigate copiously with water for at least 10 minutes. Obtain medical advice if any irritation or evidence of tissue damage persists.

In case of inhalation:
Remove the individual to fresh air and keep at rest. Obtain medical advice immediately.

In case of skin contact:
Remove contaminated clothes. Wash skin with large volumes of water.
If irritation persists, or any sign of tissue damage is apparent, obtain medical advice immediately.

In case of ingestion:
Rinse mouth with water. Obtain medical advice immediately.

4.2 Most important symptoms and effects, both acute and delayed

No specific data available.

4.3 Indication of immediate medical attention and special treatment needed

No specific data available.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media

In the event of fire, adequate extinguishers should be used. Avoid inhalation of smoke and fumes. In case of insufficient ventilation, wear suitable respiratory equipment.

5.2 Special hazard arising from the substance or mixture

No specific hazard known.

5.3 Advice for fire-fighters

No specific advice.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:
Adequate protective gloves should be worn when handling spillages. No smoking. Avoid naked flames or other potential sources of ignition (eg. electrical equipment).

Avoid skin contamination and inhalation of vapour.

Individual washing routines should be followed after any potential contact.
Ensure adequate ventilation in working areas following accidental releases.

For emergency personnel:
Apply the same recommendations as section 6.1

6.2 Environmental precautions

Do not discharge directly into drains, air, into soil or into the aquatic environment.

6.3 Methods and material for containment and cleaning up

For containment:
Any absorbent used for cleaning up spillage should be disposed promptly,accordingly to local regulation.
Gross spillages should be contained by any means, and disposal of this should be in accordance with Government Regulations.

For cleaning-up:
Spillages should be disposed of in accordance with Governmental Regulations.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes.
Wear adequate protective gloves protection and eye/face protection.
No smoking. Avoid any sources of ignition.

Avoid exposing to high temperature during processing.
Do not ingest or apply to the skin as such. Good personal washing routines should be followed.
Maintain adequate local and general ventilation where product is handled.

Protective measures
Keep strict control of dust accumulation to a minimum.Maintain adequate local and general ventilation where product is handled.Avoid any sources of ignition.

Advice on general occupational hygiene
Good personal washing routines should be followed.

7.2 Conditions for safe storage, including any incompatibilities

It is good general practice to store in closed, preferably full, containers away from heat sources, and protected from extremes of temperature. Do not re-use the empty container.
Respect generals rules for compatibility storage.

7.3 Specific end use(s)

Not available at this time.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Contains no substances with occupational exposure limit values

Derived No Effect Level (DNEL)

DNEL Worker (dermal), systemic effects - long-term, = 3.26 mg/kg bw/day
DNEL Worker (dermal), systemic effects - acute, = 19.54 mg/kg bw/day
DNEL Worker (dermal), local effects - long-term, = 8.14 mg/kg bw/day
DNEL Worker (dermal), local effects - acute, = 48.85 mg/kg bw/day
Hazard conclusion Worker (eyes), No hazard identified.
DNEL Worker (inhalation), systemic effects - long-term, = 11.48 mg/m³
DNEL Worker (inhalation), systemic effects - acute, = 68.9 mg/m³
DNEL Worker (inhalation), local effects - long-term, = 28.71 mg/m³
DNEL Worker (inhalation), local effects - acute, = 172.26 mg/m³
DNEL Consumer (oral), systemic effects - long-term, = 1.63 mg/kg bw/day
DNEL Consumer (oral), systemic effects - acute, = 9.77 mg/kg bw/day
DNEL Consumer (inhalation), systemic effects - long-term, = 2.83 mg/m³
DNEL Consumer (inhalation), systemic effects - acute, = 16.99 mg/m³
DNEL Consumer (inhalation), local effects - long-term, = 7.08 mg/m³
DNEL Consumer (inhalation), local effects - acute, = 42.48 mg/m³
Hazard conclusion Consumer (eyes), No hazard identified.
DNEL Consumer (dermal), systemic effects - long-term, = 1.63 mg/kg bw/day
DNEL Consumer (dermal), systemic effects - acute, = 9.77 mg/kg bw/day
DNEL Consumer (dermal), local effects - long-term, = 4.07 mg/kg bw/day
DNEL Consumer (dermal), local effects - acute, = 24.43 mg/kg bw/day

Predicted No Effect Concentration (PNEC)

PNEC Aqua (freshwater) = 0.001 mg/l
PNEC Aqua (marine water) = 0.0001 mg/l
PNEC Water (intermittent release) = 0.01 mg/l
PNEC Sediment (freshwater) = 0.43 mg/kg sediment dw
PNEC Sediment (marine water) = 0.043 mg/kg sediment dw
PNEC STP = 10 mg/l
PNEC Soil = 0.0854 mg/kg soil dw

PNEC Air No hazard identified.
PNEC Oral (secondary poisoning) = 18.5 mg/kg food

8.2 Exposure controls

Avoid exposing to high temperature during processing.
Maintain adequate local and general ventilation where product is handled.

Appropriate engineering controls
Maintain adequate local and general ventilation where product is handled and dispensed.

Environmental exposure controls
Not available at this time. Minimize release to the environment.

Personal protection
Respiratory protection: Where ventilation (LEV) is inadequate to prevent any inhalation of substances, use adequate respiratory apparatus.

Hand protection: Use chemical resistant gloves classified under Standard EN 374: Protective gloves against chemicals. Preferred glove barrier materials: Neoprene and Nitrile. When prolonged or frequently repeated contact may occur, a glove with a protection class of 4 or higher (breakthrough time greater than 120 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to EN 374) is recommended. Thickness > or = 0,2mm. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Eye protection: Adequate safety glasses should be used.

Skin protection: Wear protective clothing, overall if necessary to limit the odour contamination of personal clothing. Individual washing routines should be followed after any potential contact.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical form:	LIQUID
Colour :	COLOURLESS TO YELLOW
Odour :	Characteristic strong odour according to the commercial description of the substance.

Melting point/freezing point (°C):	< -50 °C (OECD 102)
Boiling point or initial boiling point and boiling range (°C):	= 320 °C (OECD 103)
Flammability:	The product is not flammable.
Lower and upper explosion limit:	Not determined

Flash point:	> 100°C
Auto-ignition temperature (°C) :	= 240 °C at 1013.25hPa (Method A15)
Decomposition temperature :	No decomposition if stored and applied as directed.
pH:	Not determined
Kinematic viscosity:	= 22.705 mPa.s at 20°C (OECD 114)
Water solubility (20°C) :	= 20.9 mg/l at 20°C (Method A6)
Partition coefficient n-octanol/water (log value):	Log Kow > 3.2 - 5.7 (OECD 117)
Vapour pressure (Pa) :	VP = 0.94 Pa at 20°C (OECD 104)
Density and/or relative density:	= 0.958 at 20°C (OECD 109)
Relative vapour density:	Not determined
Particle characteristics:	Not applicable, the product is a liquid

9.2 Other information

9.2.1. Information with regard to physical hazard classes

None

9.2.2. Other safety characteristics

None

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

No reaction known with water.

10.2 Chemical stability

Good stability at standard temperature.

10.3 Possibility of hazardous reactions

Not known.

10.4 Conditions to avoid

Avoid temperatures above or at least 5 °C below flash point for any flammable liquids.
Do not heat closed containers.
Avoid contact with oxidizing agents.

10.5 Incompatible materials

Not known.

10.6 Hazardous decomposition products

Contact with water or storage under recommended conditions for one year should not produce dangerous decomposition products.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

(a) acute toxicity
Acute oral toxicity (Rat, Gavage): LD50 > 5000 mg/kg
Acute dermal toxicity (Rabbit): LD50 > 5000 mg/kg

(b) skin corrosion/irritation
Primary Skin irritation (Rabbit, OECD 404, Semi-occlusive): Non irritant

(c) serious eye damage/irritation
In vitro Bovine corneal opacity and permeability (BCOP) test (OECD 437): Not corrosive or severe irritant
Acute Eye irritation (Rabbit, OECD 405, No washout): Non irritant

(d) respiratory or skin sensitisation
Local Lymph Node Assay (LLNA) OECD 429: Sensitising to skin

(e) germ cell mutagenicity
Bacterial Reverse Mutation test (Ames) (Salmonella, OECD 471, With and without S9, 5 strains): Non mutagenic
In vitro mammalian cell gene mutation test (Mouse, L5178Y cells, OECD 476, Mouse lymphoma assay): Non mutagenic
In vitro Mammalian Chromosome Aberration Test (Chinese hamster, OECD 473): No chromosomal aberration

(f) carcinogenicity
No data available

(g) reproductive toxicity
Reproduction/Developmental Toxicity Screening Test (Rat, OECD 421, Dietary, 56 day(s)): NOAEL = 277 mg/kg/day
NOAEL (reproduction) = 277 mg/kg/day
NOAEL (development) = 277 mg/kg/day

(h) STOT-single exposure
No data available

(i) STOT-repeated exposure
Repeated Dose 28-Day Oral Toxicity Study in Rodents (Rat, OECD 407, Dietary): NOAEL = 977 mg/kg/day

(j) aspiration hazard
No data available

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

No data available

11.2.2 Other information

No data available

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Alga, Growth Inhibition Test (Pseudokirchneriella subcapitata, OECD 201, WAF): 72h EL50 = 73 mg/l (Based on nominal concentration)
Daphnia sp. Acute Immobilisation Test (OECD 202, Static): 48h EL50 = 21 mg/l (Based on nominal concentration)
Fish, Acute Toxicity Test (Rainbow trout (Oncorhynchus Mykiss), OECD 203, WAF): 96h LL50 = 5.7 mg/l (Based on nominal concentration)
Activated Sludge, Respiration Inhibition Test : NOEC = 100 mg/l
Data on component - Earthworm, Acute Toxicity Tests (Eisenia foetida, OECD 207, 14 day(s)): LC50 = 766 mg/kg (Based on nominal concentration)
Data on component - Earthworm, Acute Toxicity Tests (Eisenia foetida, OECD 207, 14 day(s)): LC50 = 420 mg/kg (Based on nominal concentration)

12.2 Persistence and degradability

Ready Biodegradation - Manometric Respirometry Test (OECD 301F, Sludge): Readily biodegradable (64% in 28 day(s))

12.3 Bioaccumulative potential

Log Kow > 3.2 - 5.7 (OECD 117)

12.4 Mobility in soil

Adsorption coefficient (OECD 121): Log Koc = 3.63 - 4.63

12.5 Results of PBT and vPvB assessment

Not applicable

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

No data available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product: Dispose of as special waste in compliance with local and national regulations. Do not dump into any sewers, on the ground, or into any body of water.

Contaminated packaging: for used, contaminated and residual materials additional evaluations may be required.

European waste disposal number: No waste code from the European waste catalog can be assigned to this product, because only the use made by the user allows this attribution. The waste code is established in consultation with waste disposal services.

SECTION 14: TRANSPORT INFORMATION

In case of accidental spillage or fire during transport, refer to instructions given under points 5, 6, 7 and 8 above.

	UNO	**Land transport (ADR/RID)**	**Sea transport (IMDG-Code)**	**Air transport (ICAO-IATA)**
14.1 UN-No:	3082	3082	3082	3082
14.2 Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PATCHOULI ALCOHOL)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PATCHOULI ALCOHOL)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PATCHOULI ALCOHOL)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PATCHOULI ALCOHOL)
14.3 Class:	9	9	9	9
14.4 Packing Group:	III	III	III	III
14.5 Environmental hazards:	Hazardous to the Environment	Hazardous to the Environment	Marine pollutant	Hazardous to the Environment
14.6 Special precautions for user:	Refer to section 7	Refer to section 7	Refer to section 7	Refer to section 7
14.7 Maritime transport in bulk according to IMO instruments:	Not applicable	Not applicable	Not applicable	Not applicable

SECTION 15: REGULATORY INFORMATION

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

European Regulations
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
Commission Regulation (EU) 2020/878 of 18 June 2020 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

15.2 Chemical Safety Assessment

Chemical Safety Assessment has been carried out.

SECTION 16: OTHER INFORMATION

Revisions
March-2025 : Version 14.0 - Updates to sections 1, 2, 3, 9, 14, 15, 16
November-2025 : Version 14.1 - Updates to sections 15, 16

Key literature references
RIFM database
REACH
Supplier information

Full text of phrases used under section 2

H304	May be fatal if swallowed and enters airways.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

P273	Avoid release to the environment.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P391	Collect spillage.
P331	Do NOT induce vomiting.
P363	Wash contaminated clothing before reuse.
P405	Store locked up.

Full text of phrases used under section 3

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.
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.

We believe that the information contained herein is current as of the date of this Safety Data Sheet. Since the use of this information and the conditions of use of the product are not within the control of dsm-firmenich, it is the user's obligation to determine conditions of safe use of the product.

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