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

941962
EXALTOLIDE®
dsm-firmenich product

EU Specific Identifiers:
EC CAS: 0000106-02-5
EC No: 203-354-6
EU REACH No: 01-2119987323-31
Oxacyclohexadecan-2-one

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

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:
Warning

Hazard Statements:

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.
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.

2.3 Other hazards

No data available at this time.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance

Chemical substance.

Contains :	GHS Classification:
>= 99.0 <= 100.0% EU Specific Identifiers: N° EU REACH: 01-2119987323-31 EC CAS: 0000106-02-5 Oxacyclohexadecan-2-One N° EC: 203-354-6	Skin Sensitization - Cat. 1B [H317] Environmental Hazard (chronic) - Cat. 2 [H411]
>= 0.5 < 1.0% EU Specific Identifiers: EC CAS: 0034902-57-3 Reaction Mass Of: (E)-Oxacyclohexadec-12-En-2-One, (E)-Oxacyclohexadec-13-En-2-One, A) (Z)-Oxacyclohexadec-(12)-En-2-One And B) (Z)-Oxacyclohexadec-(13)-En-2-One N° EC: 422-320-3 N° Index : 606-092-00-4	Environmental Hazard (acute) - Cat. 1 [H400] Environmental Hazard (chronic) - Cat. 1 [H410]

SCL/M-factor/ATE:

EC CAS 0034902-57-3	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 dust.

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:

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

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Keep strict control of dust accumulation to a minimum.

Avoid contact with skin and eyes.
Wear adequate protective gloves protection and eye/face protection.
No smoking. Avoid any source of ignition. Use flameproof electrical equipment and spark-reduced tools. Ensure that all equipments are properly bonding and earthing.

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)

Hazard conclusion Worker (dermal), systemic effects - long-term, No hazard identified.
Hazard conclusion Worker (dermal), local effects - long-term, Medium hazard (no threshold derived) (skin sensitisation)
Hazard conclusion Worker (inhalation), No hazard identified.

Hazard conclusion Consumer (oral), No hazard identified.
Hazard conclusion Consumer (inhalation), No hazard identified.
Hazard conclusion Consumer (dermal), systemic effects - long-term, No hazard identified.
Hazard conclusion Consumer (dermal), local effects - long-term, Medium hazard (no threshold derived) (skin sensitisation)

Predicted No Effect Concentration (PNEC)

PNEC Aqua (freshwater) = 2.7 µg/l
PNEC Aqua (marine water) = 0.27 µg/l
PNEC Water (intermittent release) No hazard identified.
PNEC Sediment (freshwater) = 21 mg/kg sediment dw
PNEC Sediment (marine water) = 4.2 mg/kg sediment dw
PNEC STP = 10 mg/l
PNEC Soil = 5.44 mg/kg soil dw
PNEC Air No hazard identified.
PNEC Oral (secondary poisoning) No hazard identified.

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:	SOLID
Colour :	WHITE
Odour :	Characteristic strong odour according to the commercial description of the substance.

Melting point/freezing point (°C):	= 34.6 °C (OECD 102)
Boiling point or initial boiling point and boiling range (°C):	= 325 °C (OECD 103)
Flammability:	Not expected
Lower and upper explosion limit:	Not applicable, the product is a solid.
Flash point:	> 180°C
Auto-ignition temperature (°C) :	Not applicable, the product is a solid.
Decomposition temperature :	No decomposition if stored and applied as directed.
pH:	Not determined
Kinematic viscosity:	Not applicable, the product is a solid.
Water solubility (20°C) :	= 0.3 mg/l at 20°C (OECD 105)
Partition coefficient n-octanol/water (log value):	Log Kow = 5.79 (OECD 123)
Vapour pressure (Pa) :	VP = 0.085 Pa at 25°C (OECD 104)
Density and/or relative density:	= 0.990 at 21.6°C (OECD 109)
Relative vapour density:	Not determined
Particle characteristics:	Not determined

9.2 Other information

9.2.1. Information with regard to physical hazard classes

None

9.2.2. Other safety characteristics

c) formation of explosible dust/air mixtures
No data available at this time.

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 : LD50 > 2000 mg/kg (Conclusion of the Weight of Evidence based on 3 studies)
Acute dermal toxicity : LD50 > 2000 mg/kg (Conclusion of the Weight of Evidence based on 2 studies)

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

(c) serious eye damage/irritation
Acute Eye irritation (Rabbit): Non irritant (Conclusion of the Weight of Evidence based on 2 studies)

(d) respiratory or skin sensitisation
Skin sensitization : Sensitising to skin (Conclusion of the Weight of Evidence based on 9 studies)

(e) germ cell mutagenicity
Bacterial Reverse Mutation test (Ames) (Salmonella, OECD 471, With and without S9, 5 strains): Non mutagenic
Data on analogue - In vitro mammalian cell gene mutation test (Mouse, OECD 476, Mouse lymphoma assay): Non mutagenic
In vitro Mammalian Chromosome Aberration Test (OECD 473): No chromosomal aberration (Conclusion of the Weight of Evidence based on 2 studies)

(f) carcinogenicity

No data available

(g) reproductive toxicity
Data on analogue - One-Generation Reproduction Toxicity Study (Rat, OECD 415, Gavage, 72 day(s)): NOAEL >= 1000 mg/kg/day
Data on analogue - Prenatal development toxicity study (Rat, OECD 414, Gavage, 15 day(s)): NOEL (development) >= 1000 mg/kg/day
NOAEL (maternal) >= 1000 mg/kg/day

(h) STOT-single exposure
No data available

(i) STOT-repeated exposure
Data on analogue - Repeated Dose 90-Day Oral Toxicity Study in Rodents (Rat, OECD 408, Gavage): NOEL >= 1000 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 (Scenedesmus subspicatus, OECD 201, Static): 72h ErC10 = 0.421 mg/l (Based on average measured concentrations)
72h ErC50 > 0.47 (Greater than limit of solubility.)
Daphnia sp. Acute Immobilisation Test (OECD 202): EC50 (Greater than limit of solubility)
Fish, Acute Toxicity Test (OECD 203): LC50 (Greater than limit of solubility)
Data on analogue - Activated Sludge, Respiration Inhibition Test (OECD 209, Static): 3h EC50 > 100 mg/l (No inhibitory effect of the test item at any concentration.)
3h NOEC > 100 mg/l (Based on nominal concentration)
Daphnia magna Reproduction Test (OECD 211, 21 day(s)): NOEC = 0.068 mg/l (Based on average measured concentrations)
Data on analogue - Fish, Early-Life Stage Toxicity Test (Pimephales promelas, OECD 210, 33 day(s)): NOEC = 0.027 mg/l (Based on average measured concentrations)
Data on analogue - Determination of the toxic effect of sediment samples on growth, fertility and reproduction of the Nematode (Caenorhabditis elegans, ISO 10872-sed, 96 h): EC10 > 1000 mg test item/kg sediment dry weight
NOEC > 1000 mg test item/kg sediment dry weight (No effects at the highest concentration tested.)

12.2 Persistence and degradability

Ready Biodegradation - Manometric Respirometry Test (OECD 301F, Sludge): Readily biodegradable (90% in 28 day(s))

12.3 Bioaccumulative potential

Log Kow = 5.79 (OECD 123)

12.4 Mobility in soil

Data on analogue - Adsorption coefficient (OECD 121): Log Koc = 4.65

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:	3077	3077	3077	3077
14.2 Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CYCLOPENTADECANOLIDE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CYCLOPENTADECANOLIDE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CYCLOPENTADECANOLIDE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CYCLOPENTADECANOLIDE)
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

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.
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.
P363	Wash contaminated clothing before reuse.

Full text of phrases used under section 3

H317	May cause an allergic skin reaction.
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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