

# Firmenich

## GHS Safety Data Sheet - US

According to Regulation HCS 2012

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

### 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

#### 1.1 Product identifier

**941962**  
EXALTOLIDE® 941962  
© Firmenich product

CAS No: 106-02-5  
EC No: 203-354-6  
REACH No: 01-2119987323-31

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

Ingredient for use in products that may be ingested and/or fragrance ingredient for use in consumer product.  
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

**John Carey**  
Firmenich Inc.  
P.O. Box 5880  
Princeton - New Jersey 08543 - USA  
john.carey@firmenich.com  
Tel.: +1.609.452.1000

#### 1.4 Emergency telephone number

FOR INFORMATION OR IN AN EMERGENCY CALL NCEC @ +1 215 207 0061.

### 2 HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

According to Regulation HCS 2012

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:**

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### Signal Word:

Warning

### Hazard Statements:

H317 May cause an allergic skin reaction.  
H411 Toxic to aquatic life with long lasting effects.

### Precautionary Statements:

P261 Avoid breathing dust.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P273 Avoid release to the environment.  
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.

## 3 COMPOSITION/INFORMATION ON INGREDIENTS

The exact percentage (concentration) of composition has been withheld as a trade secret.

### 3.1 Substance

Chemical substance.

#### Contains :

>= 99.0 <= 100.0%  
Oxacyclohexadecan-2-One  
N° CAS : 0000106-02-5  
N° EINECS: 203-354-6  
N° REACH: 01-2119987323-31

#### GHS Classification:

Skin Sensitization - Cat. 1B [H317]  
Environmental Hazard (chronic) - Cat. 2 [H411]

## 4 FIRST-AID MEASURES

### 4.1 Description of first aid measures

General information:

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

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In case of eye contact:

In the event of contact with the eyes, irrigate with water for at least 15 minutes; obtain medical advice if irritation persists.

In case of inhalation:

In the event of exposure to vapors, immediately remove from the area to a fresh air environment.

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:

In the event of accidental ingestion, rinse mouth with water. Give up to one tumbler (half pint) of milk or water. Obtain medical advice immediately.

Do not induce vomiting, 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.

### **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.

Use standard procedures and preferred extinguishing media as stated below.

Extinguishing media: Water, foam, carbon dioxide or dry chemical.

#### 5.2 Special hazard arising from the substance or mixture

Product is a combustible powder. Like all combustible powders, it may form explosive mixtures if suspended in air.

None.

#### 5.3 Advice for fire-fighters

No specific advice.

### **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:

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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:

Small Spills can be swept up and disposed of properly.

Do not allow powder to accumulate on horizontal surfaces, as an explosive dust/air mixture could occur if suddenly dispersed into the air.

Vapors may cause vomiting and nausea. Wear appropriate respiratory protection.

For cleaning-up:

Spillages should be disposed of in accordance with Governmental Regulations.

## **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 general rules for compatibility storage.

### 7.3 Specific end use(s)

Not available at this time.

## **8 EXPOSURE CONTROLS/PERSONAL PROTECTION**

### 8.1 Control parameters

### 8.2 Exposure controls

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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: Breathing of the vapors or dust particles may be hazardous. In the absence of appropriate engineering controls such as spot ventilation, ventilated enclosures, etc., workers should avail themselves of the appropriate NIOSH approved respiratory protection. OSHA has established limits for Respirable dust (PEL of 5 mg/m<sup>3</sup>) TWA and Total dust (PEL of 15 mg/m<sup>3</sup>)TWA. It is recommended that when using powders that air monitoring of the workplace be conducted to ensure that these levels are not exceeded.

Hand protection: Adequate Protective Gloves should be worn.

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.

## **9 PHYSICAL AND CHEMICAL PROPERTIES**

### 9.1 Information on basic physical and chemical properties

Appearance :	SOLID
Colour :	WHITE
Odour :	Characteristic strong odour according to the commercial description of the substance.
pH :	Not applicable
Melting point/range (°C) :	Not available
Initial boiling point/range (°C) :	Not available
Flash point (closed cup) :	> 356 Fahrenheit (> 180 Centigrade)
Evaporation rate :	Not available
Flammability (solid/gas) :	Not applicable
Upper/lower flammability or explosive limits :	N/A
Vapor pressure (At 20°C in mm Hg) :	< 0.1 mm
Calculated vapor pressure (At 20°C in mm Hg):	
Vapour density :	Not available
Relative density (d 20/20) :	Not available
Water solubility (20°C) :	Not available
Partition coef. (n-octanol/water) :	Not available
Auto-ignition temperature (°C):	Not available
Decomposition temperature :	Not available
Viscosity :	Not available
Oxidizing properties :	Not available

### 9.2 Other safety information

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### 9.2.1 Explosive properties (Measured)

No data available at this time.

## **10 STABILITY AND REACTIVITY**

### 10.1 Reactivity

No reaction known with water.

### 10.2 Chemical stability

Presents no significant reactivity hazard. Normally stable even at elevated temperatures and pressures. Avoid temperatures above or near to the flash point. Not pyrophoric nor reactive with water. Does not undergo explosive decomposition, is shock stable, and is not an oxygen donor. Does not form explosive mixtures with other organic materials. Will not undergo hazardous exothermic polymerization.

### 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

Avoid strong oxidizing agents.

### 10.6 Hazardous decomposition products

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

## **11 TOXICOLOGICAL INFORMATION**

### **11.1 Information on toxicological effects**

#### (a) acute toxicity

Acute oral toxicity : LD50 = 2000 - 5000 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)

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(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):

NOAEL  $\geq$  1000 mg/kg/day

Data on analogue - Prenatal development toxicity study (Rat, OECD 414, Gavage, 15 day(s)):

NOEL (development) = 1000 mg/kg/day

NOEL = 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

## **12 ECOLOGICAL INFORMATION**

### 12.1 Toxicity

Alga, Growth Inhibition Test (Scenedesmus subspicatus, OECD 201, Static):

72 ErC10 = 0.421 mg/l (Based on measured concentration)

72 ErC50 > 0.47 mg/l (Based on measured concentration)

Daphnia sp. Acute Immobilisation Test and Reproduction Test (OECD 202, Semi-static): 48 EC50 > 0.17 mg/l

Daphnia sp. Acute Immobilisation Test and Reproduction Test (OECD 202): EC50 = 0.35 - 1.78 mg/l (Conclusion of the Weight of Evidence based on 4 studies)

Fish, Acute Toxicity Test (Zebra fish, OECD 203, Semi-static): 96 LC50  $\geq$  0.11 mg/l (Based on measured concentration)

Fish, Acute Toxicity Test ( OECD 203): LC50 = 0.11 - 2 mg/l (Conclusion of the Weight of Evidence based on 3 studies)

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Data on analogue - Activated Sludge, Respiration Inhibition Test (OECD 209, Static):

3h EC<sub>50</sub> > 100 mg/l (Based on nominal 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 measured concentration)

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):

EC<sub>10</sub> > 1000 mg test item/kg sediment dry weight

NOEC = 544 mg test item/kg sediment dry weight

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

Partition coefficient (OECD 123): Log K<sub>ow</sub> = 5.79

12.4 Mobility in soil

Data on analogue - Adsorption coefficient (OECD 121): Log K<sub>oc</sub> = 4.65

12.5 Results of PBT and vPvB assessment

Not applicable

12.6 Other adverse effects

No data available

## **13 DISPOSAL CONSIDERATIONS**

### **13.1 Waste treatment methods**

Product: The product should be handled according to the instructions given under sections 6, 7 and 8. Dispose of according to local or national regulations. The product should not be allowed to enter drains or the environment.

Contaminated packaging: Empty packaging should be disposed according to local or national regulations by an approved waste handling

## **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

UN-No:	3077
Proper Shipping Name:	Environmentally hazardous substance, solid, n.o.s. (CYCLOPENTADECANOLIDE)
Class:	9
Packing Group:	III Hazardous to the Environment

Land transport (ADR/RID)



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UN-No: 3077  
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(CYCLOPENTADECANOLIDE)  
Class: 9  
Packing group: III

### Sea transport (IMDG-Code)

UN-No: 3077  
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(CYCLOPENTADECANOLIDE)  
Class: 9  
Packing group: III  
Marine pollutant

### Air transport (ICAO-IATA)

UN-No: 3077  
Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s.  
(CYCLOPENTADECANOLIDE)  
Class: 9  
Packing group: III

## **15 REGULATORY INFORMATION**

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

This chemical is NOT subject to reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 29 CFR Part 1910.1200.

### 15.2 Chemical Safety Assessment

No data available at this time.

## **16 OTHER INFORMATION**

### Revisions

Jun-2018 : Version 8.0 - Updates to sections 2, 8, 9, 11, 12

### Key literature references

RIFM database  
OECD SIDS  
EU IUCLID  
Supplier information

### Full text of phrases used under section 2

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H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
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.
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 Firmenich, it is the user's obligation to determine conditions of safe use of the product.**

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