

# 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

**937490**

DARTANOL® 937490

© Firmenich product

CAS No: 28219-61-6

EC No:

REACH No: 01-2119529224-45

#### 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

**John Carey**

Firmenich Inc.

250 Plainsboro Road

Princeton - New Jersey 08536 - USA

john.carey@firmenich.com

Tel.: +1.609.452.1000

#### 1.4 Emergency telephone number

FOR INFORMATION OR IN AN EMERGENCY CALL NCEC @ +1 866 928 0789 (TOLL FREE) OR +1 215 207 0061.

### **2 HAZARDS IDENTIFICATION**

#### 2.1 Classification of the substance or mixture

According to Regulation HCS 2012

Flammable Liquid - Cat. 4	H227
Eye Irritation - Cat.2A	H319
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:

H319 Causes serious eye irritation.  
H227 Combustible liquid  
H411 Toxic to aquatic life with long lasting effects.

### Precautionary Statements:

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P264 Wash thoroughly after handling.  
P273 Avoid release to the environment.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313 If eye irritation persists: Get medical advice/attention.  
P403+P235 Store in a well-ventilated place. Keep cool.

### 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%  
2-Buten-1-ol, 2-Ethyl-4-(2,2,3-Trimethyl-3-Cyclopenten-1-yl)-  
N° CAS : 0028219-61-6  
N° ELINCS: --  
N° REACH: 01-2119529224-45

#### GHS Classification:

Eye Irritation - Cat.2A [H319]  
Environmental Hazard (chronic) - Cat. 2 [H411]

## 4 FIRST-AID MEASURES

### 4.1 Description of first aid measures

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### General information:

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

### 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: Foam, carbon dioxide or dry chemical.

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

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:

Impervious 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.

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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:

Small spills can be wiped up with a cloth or paper. Standard absorbents can be used (saw dust, sand, vermiculite). Wear rubber gloves. Avoid contact with skin. If skin contact occurs, wash liberally with soap and water.

For cleaning-up:

Spillages should be disposed of in accordance with Governmental Regulations.

## **7 HANDLING AND STORAGE**

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes.

Wear impervious 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 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

Contains no substances with occupational exposure limit values

### **Derived No Effect Level (DNEL)**

No data available

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### **Predicted No Effect Concentration (PNEC)**

No data available

### 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: None required; avoid breathing vapors.  
Hand protection: Adequate and Impervious 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 :	LIQUID
Colour :	COLOURLESS TO VERY PALE YELLOW
Odour :	Characteristic strong odour according to the commercial description of the substance.
pH :	Not available
Melting point/range (°C) :	= -58.2 - -46.0 °C (OECD 102)
Initial boiling point/range (°C) :	= 278.7 °C at 101.325kPa (OECD 103)
Flash point (closed cup) :	= 199 Fahrenheit (= 93 Centigrade)
Evaporation rate :	Not available
Flammability (solid/gas) :	Not applicable
Explosive properties (St class) :	N/A
Vapor pressure (At 20°C in mm Hg) :	< 0.1 mm
Vapour density :	Not available
Relative density (d 20/20) :	= 0.916 at 20°C (OECD 109)
Water solubility (20°C) :	= 25.83 mg/l at 20°C (OECD 105)
Partition coef. (n-octanol/water) :	Log Kow = 4.4 (OECD 117)
Auto-ignition temperature (°C) :	= 250 °C at 99.663 -. 99.353kPa (Method A15)
Decomposition temperature :	Not available
Viscosity :	= 69.5 mPa.s at 20°C (OECD 114)
Explosive properties :	Not available
Oxidizing properties :	Not available

### 9.2 Other safety information

None

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### **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 (Rat, Gavage): LD50 > 2000 mg/kg

Acute dermal toxicity (Rat, OECD 402, Open to air): LD50 > 5000 mg/kg

##### (b) skin corrosion/irritation

Primary Skin irritation (Rabbit, OECD 404, Semi-occlusive): Non irritant

##### (c) serious eye damage/irritation

Acute Eye irritation (Rabbit): Irritant (Conclusion of weight of evidence based on 3 studies)

##### (d) respiratory or skin sensitisation

Guinea pig Maximisation test (OECD 406): Non-sensitising to skin

##### (e) germ cell mutagenicity

Bacterial Reverse Mutation test (Ames) (Salmonella + E. Coli, OECD 471, With and without S9, 5 strains): Non mutagenic

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In vitro mammalian cell gene mutation test (Mouse, L5178Y cells, OECD 476, With and without S9):  
Non mutagenic  
In vitro Mammalian Chromosome Aberration Test (Chinese hamster, OECD 473): No chromosomal  
aberration

(f) carcinogenicity  
No data available

(g) reproductive toxicity  
Combined Repeat. Dose Tox. & Reprod./Develop. Tox. Screening (Rat, OECD 422, Gavage):  
NOAEL (fertility) = 300 mg/kg/day  
NOAEL (development) = 300 mg/kg/day  
Prenatal development toxicity study (Rat, OECD 414, Gavage):  
NOAEL (maternal) = 300 mg/kg/day  
NOAEL (development) = 750 mg/kg/day

(h) STOT-single exposure  
No data available

(i) STOT-repeated exposure  
Repeated Dose 90-Day Oral Toxicity Study in Rodents (Rat, OECD 408, Dietary): NOAEL = 981  
mg/kg/day (Male)

(j) aspiration hazard  
No data available

## **12 ECOLOGICAL INFORMATION**

### 12.1 Toxicity

Algal Toxicity, Tiers I and II (*Selenastrum capricornutum*, EPA 850.5400, Static):

96 h ErC50 = 2.5 mg/l (Based on average measured concentrations)

96 h NOEC = 0.44 mg/l (Based on average measured concentrations)

Aquatic Invertebrate Acute Toxicity Test, Freshwater Daphnids (EPA 850.1010, Flow-through): 48h  
EC50 = 1.4 mg/l (Based on average measured concentrations)

Daphnia sp. Acute Immobilisation Test and Reproduction Test (OECD 202, Semi-static): 48h EC50  
= 1.34 mg/l (Based on average measured concentrations)

Freshwater and Saltwater Fish Acute Toxicity Test (*Lepomis macrochirus* (Bluegill Sunfish), EPA  
850.1075, Flow-through): 96h LC50 = 1.1 mg/l (Based on average measured concentrations)

Activated Sludge, Respiration Inhibition Test (OECD 209, Static):

3h EC50 = 225 mg/l (Based on nominal concentrations)

3h EC10 = 10 mg/l (Based on nominal concentrations)

Daphnia magna Reproduction Test (OECD 211, 21 day(s)): NOEC = 0.48 mg/l (Based on time  
Weighted average concentrations)

QSAR - Fish, Early-Life Stage Toxicity Test (QSAR-OECD210, 28 day(s)): NOEC = 0.23 mg/l

### 12.2 Persistence and degradability

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Ready Biodegradation - Closed Bottle Test (301D Screening): Enhanced biodegradable (64% in 60 day(s))

Ready Biodegradation - Closed Bottle Test (OECD 301D, Freshwater): Non readily biodegradable (5% in 28 day(s))

QSAR - Phototransformation of chemicals in air (QSAR PhototranAir): Inherently photolabile (Estimated Half-life = 0.308 h)

Biodegradation in Activated Sludge Test (OECD 314B): Ultimately biodegradable (DT50 = 0.025h)

Hydrolysis as a Function of pH: Estimated Half-life > 1 year Stable

### 12.3 Bioaccumulative potential

QSAR - Bioconcentration factor BCF Fish = 647.7 L/kg (Conclusion of weight of evidence based on 3 QSAR studies)

Log Kow = 4.4 (OECD 117)

### 12.4 Mobility in soil

QSAR - Adsorption coefficient: Log Koc = 3.07

### 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:	3082
Proper Shipping Name:	Environmentally hazardous substance, liquid, n.o.s. (BUTENOL,2-ET-TRIME-CYCLOPENTENYL)
Class:	9
Packing Group:	III Hazardous to the Environment

### Land transport (ADR/RID)



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UN-No: 3082  
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BUTENOL,2-ET-TRIME-CYCLOPENTENYL)  
Class: 9  
Packing group: III

### Sea transport (IMDG-Code)

UN-No: 3082  
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BUTENOL,2-ET-TRIME-CYCLOPENTENYL)  
Class: 9  
Packing group: III  
Marine pollutant

### Air transport (ICAO-IATA)

UN-No: 3082  
Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (BUTENOL,2-ET-TRIME-CYCLOPENTENYL)  
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-2020 : Version 9.2 - Updates to sections 1, 2, 3 ,8 ,9, 11, 12, 14, 15, 16

### Key literature references

RIFM database  
OECD SIDS  
EU IUCLID  
Supplier information

### Full text of phrases used under section 2

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H319	Causes serious eye irritation.
H227	Combustible liquid
H411	Toxic to aquatic life with long lasting effects.
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P264	Wash thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P370+P378	In case of fire: Use appropriate fire extinguishers for fire control.
P391	Collect spillage.
P403+P235	Store in a well-ventilated place. Keep cool.

### Full text of phrases used under section 3

H319	Causes serious eye irritation.
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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