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

964898 HEDIONE® 964898 © Firmenich product

CAS No:	24851-98-7
EC No:	246-495-9
REACH No:	01-2119493355-31

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. 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

Not Classified according to the rules of the HCS 2012.

Additional information

Full text of listed statements : See section 16

2.2 Label elements

According to Regulation HCS 2012

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2.3 Other hazards No data available at this time.

<u>3 COMPOSITION/INFORMATION ON INGREDIENTS</u></u>

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

<u>3.1 Substance</u> Chemical substance.

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: 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 advise immediately.

Do not induce vomiting, obtain medical advise immediately.

- <u>4.2 Most important symptoms and effects, both acute and delayed</u> No specific data available.
- <u>4.3 Indication of immediate medical attention and special treatment needed</u> No specific data available.

5 FIRE-FIGHTING MEASURES

According to Regulation HCS 2012

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

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:

Gloves impervious to the chemical substance 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:

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 gloves impervious to the chemical substance 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

According to Regulation HCS 2012

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

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.

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

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: Gloves impervious to the chemical substance 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 : Colour : LIQUID COLOURLESS

According to Regulation HCS 2012

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

Odour :

pH :

Melting point/range (°C) : Initial boiling point/range (°C) : Flash point (closed cup) : Evaporation rate : Flammability (solid/gas) : Explosive properties (St class) : Vapor pressure (At 20°C in mm Hg): Vapour density : Relative density (d 20/20) : Water solubility (20°C) : Partition coef. (n-octanol/water) : Auto-ignition temperature (°C) : Decomposition temperature : Viscosity : Explosive properties : Oxidizing properties :

9.2 Other safety information None

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.

Characteristic strong odour according to the commercial description of the substance.

Not available < 20 °C (OECD 102) = 302.2 °C at (OECD 103) = 298 Fahrenheit (= 148 Centigrade) Not available Not applicable N/A < 0.1 mm Not available = 1.005 at 20°C (OECD 109) = 561 mg/l at 20°C (OECD 105) Log Kow = 2.93 (OECD 107) = 259 °C at 980hPa Not available = 10.788 mPa.s at 20°C Not available Not available

According to Regulation HCS 2012

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

11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

(a) acute toxicity Acute oral toxicity (Rat, Gavage): LD50 > 10000 mg/kg Acute oral toxicity (Rat, Gavage): LD50 < 10000 mg/kg Acute Toxicity by inhalation (Rat, OECD 403, Mist): LC50 > 4.93 mg/l (b) skin corrosion/irritation Primary Skin irritation (Rabbit, OECD 404, Occlusive): Non irritant (c) serious eye damage/irritation Acute Eye irritation (Rabbit, OECD 405): Non irritant (d) respiratory or skin sensitisation Local Lymph Node Assay (LLNA) OECD 429: Non-sensitising to skin Guinea pig Maximisation test (OECD 406): Non-sensitising to skin Human Repeated Insult Patch Test: No effects Determination of Photoallergenicity in Guinea pig : No effects Determination of Photoallergenicity in Guinea pig : No effects (e) germ cell mutagenicity Bacterial Reverse Mutation test (Ames) (Salmonella + E. Coli, OECD 471, With and without S9, 5 strains): Non mutagenic Bacterial Reverse Mutation test (Ames) (Salmonella, OECD 471, With and without S9, 5 strains):

Non mutagenic

In Vivo Mammalian Erythrocyte Micronucleus Test (Mouse, OECD 474, Intraperitoneal): Non mutagenic

(f) carcinogenicity No data available

(g) reproductive toxicity
Combined Repeat. Dose Tox. & Reprod./Develop. Tox. Screening (Rat, OECD 422, Gavage): NOAEL = 1000 mg/kg/day
NOAEL (fertility) = 1000 mg/kg/day
Prenatal development toxicity study (Rat, OECD 414, Gavage, 21 day(s)): NOAEL = 80 mg/kg/day
NOAEL (development) = 120 mg/kg/day

(h) STOT-single exposure No data available

(i) STOT-repeated exposure

According to Regulation HCS 2012

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

Repeated Dose 90-Day Oral Toxicity Study in Rodents (Rat, OECD 408, Dietary): NOEL = 100 mg/kg/day

(j) aspiration hazard No data available

12 ECOLOGICAL INFORMATION

12.1 Toxicity

Alga, Growth Inhibition Test (Selenastrum capricornutum, OECD 201, Static): 72 ErC50 = 45.9 mg/l (Based on nominal concentration) 72 NOEC = 11.7 mg/l (Based on nominal concentration) Daphnia sp. Acute Immobilisation Test and Reproduction Test (OECD 202, Static): 48 EC50 = 8.25 mg/l (Based on nominal concentration) Fish, Acute Toxicity Test (Oryzias latipes, OECD 203, Semi-static): 96 LC50 = 19 mg/l (Based on nominal concentration) Daphnia magna Reproduction Test (OECD 211, 21 day(s)): EC10 = 1.86 mg/l (Based on measured data)

12.2 Persistence and degradability Ready Biodegradation - Manometric Respirometry Test (OECD 301F, Sludge): Readily biodegradable (89% in 28 day(s)) Hydrolysis as a Function of pH (OECD 111): Estimated Half-life at pH7 > 1 year Stable but unstable in basic conditions

12.3 Bioaccumulative potential Log Kow = 2.93 (OECD 107)

12.4 Mobility in soil No data available

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

According to Regulation HCS 2012

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

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

<u>UNO</u>

UN-No:	Not regulated
Proper Shipping Name:	N/A
Class:	
Packing Group:	

Land transport (ADR/RID)

UN-No: Proper Shipping Name:	Not regulated N/A
Class:	
Packing group:	

Sea transport (IMDG-Code)

UN-No:	Not regulated
Proper Shipping Name:	N/A
Class:	
Packing group:	

Air transport (ICAO-IATA)

UN-No:	Not regulated
Proper Shipping Name:	N/A
Class:	
Packing group:	

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 Amendements 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 January-2021: Version 10 - PSNUR in section 15

According to Regulation HCS 2012

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

Key literature references RIFM database OECD SIDS EU IUCLID Supplier information

Full text of phrases used under section 2

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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