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

947325
HEDIONE® HC
dsm-firmenich product

EU Specific Identifiers:
EC CAS: 0024851-98-7
EC No: 246-495-9
EU REACH No: 01-2119493355-31
Cyclopentaneacetic acid, 3-oxo-2-pentyl-, methyl ester

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

Not Classified

Additional information
Full text of listed statements : See section 16

2.2 Label elements

Hazard Inducers:

Not Classified

2.3 Other hazards

No data available at this time.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance

Chemical substance.

SCL/M-factor/ATE:
None

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, = 9.04 mg/kg bw/day
Hazard conclusion Worker (dermal), systemic effects - acute, No hazard identified.
Hazard conclusion Worker (dermal), local effects - acute & long-term, No hazard identified.
Hazard conclusion Worker (eyes), No hazard identified.
DNEL Worker (inhalation), systemic effects - long-term, = 29.3 mg/m³
Hazard conclusion Worker (inhalation), systemic effects - acute, No hazard identified.
Hazard conclusion Worker (inhalation), local effects - acute & long-term, No hazard identified.
DNEL Consumer (oral), systemic effects - long-term, = 2.5 mg/kg bw/day
Hazard conclusion Consumer (oral), systemic effects - acute, No hazard identified.
DNEL Consumer (inhalation), systemic effects - long-term, = 8.69 mg/m³
Hazard conclusion Consumer (inhalation), systemic effects - acute, No hazard identified.
Hazard conclusion Consumer (inhalation), local effects - acute & long-term, No hazard identified.
Hazard conclusion Consumer (eyes), No hazard identified.
DNEL Consumer (dermal), systemic effects - long-term, = 5.43 mg/kg bw/day
Hazard conclusion Consumer (dermal), systemic effects - acute, No hazard identified.
Hazard conclusion Consumer (dermal), local effects - acute & long-term, No hazard identified.

Predicted No Effect Concentration (PNEC)

PNEC Aqua (freshwater) = 37.2 µg/l
PNEC Aqua (marine water) = 3.72 µg/l
PNEC Sediment (freshwater) = 1897 µg/kg sediment dw
PNEC Sediment (marine water) = 189.7 µg/kg sediment dw
PNEC STP = 10 mg/l
PNEC Soil = 357.6 µg/kg soil dw

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 PALE YELLOW
Odour :	Characteristic strong odour according to the commercial description of the substance.

Melting point/freezing point (°C):	< 20 °C (OECD 102)
Boiling point or initial boiling point and boiling range (°C):	= 302.2 °C (OECD 103)
Flammability:	The product is not flammable.
Lower and upper explosion limit:	Not determined
Flash point:	= 148°C
Auto-ignition temperature (°C) :	= 259 °C
Decomposition temperature :	No decomposition if stored and applied as directed.
pH:	Not determined
Kinematic viscosity:	= 10.788 mPa.s at 20°C
Water solubility (20°C) :	= 561 mg/l at 20°C (OECD 105)
Partition coefficient n-octanol/water (log value):	Log Kow = 2.93 (OECD 107)
Vapour pressure (Pa) :	VP = 0.00021 Pa at 25°C (OECD 104)
Density and/or relative density:	= 1.005 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 (Conclusion of weight of evidence based on 4 studies)
Acute dermal toxicity (Rabbit): LD50 > 5000 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 : Not photoirritant
Determination of Photoallergenicity in Guinea pig : Not photoallergenic

(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
Reproduction Toxicity (Rat): NOAEL (reproduction) = 100 mg/kg/day (Conclusion of weight of evidence based on 2 studies)
Prenatal development toxicity study (Rat, OECD 414, Gavage, 13 day(s)): NOAEL (development) = 120 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): NOEL = 100 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 (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 (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 pH4 > 1 year
Hydrolysis as a Function of pH (OECD 111): Estimated Half-life at pH7 > 1 year
Hydrolysis as a Function of pH (OECD 111): Estimated Half-life at pH9 = 7.80 day(s)

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 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:	Not regulated	Not regulated	Not regulated	Not regulated
14.2 Proper Shipping Name:	N/A	N/A	N/A	N/A
14.3 Class:	----	----	----	----
14.4 Packing Group:	---	---	---	---
14.5 Environmental hazards:	Not applicable	Not applicable	Not applicable	Not applicable
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

No 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

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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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