

# Safety Data Sheet

acc. to OSHA HCS (29 CFR § 1910.1200)

Date of issue: 01/24/2025

Reviewed on 01/09/2025

## 1 Identification

- **Product identifier**

- **Trade name:** Cis-3-Hexenyl Formate natural

- **CAS Number:**

33467-73-1

- **Other means of identification**

- **Product number:** 1525

- **EC number:**

251-532-7

- **Application of the substance / the mixture** Flavoring Ingredients

- **Details of the supplier of the safety data sheet**

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- **Manufacturer/Supplier:**

Advanced Biotech

10 Taft Road

Totowa, NJ 07512 USA

- **Information department:**

Product Safety Department

productsafety@adv-bio.com

- **Emergency telephone number:**

Infotrac: 1-800-535-5053 (Domestic) & 1-352-323-3500 (International)

Email: responders@infotrac.net & During normal business hours: 1-973-339-6242

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flammable liquids 3 H226 Flammable liquid and vapor.

- **GHS label elements**

Pictograms on label shall be in the shape of a square set at a point and shall include a black hazard symbol on a white background with a red frame sufficiently wide to be clearly visible.

The substance is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02

- **Signal word** Warning

- **Hazard statements**

H226 Flammable liquid and vapor.

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## Precautionary statements

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
- P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

## Information pertaining to particular dangers for man and environment:

### Classification system:

### NFPA ratings (scale 0 - 4)



Health = 0  
Fire = 2  
Reactivity = 0

### HMIS-ratings (scale 0 - 4)



HEALTH 0 Health = 0  
FIRE 2 Fire = 2  
REACTIVITY 0 Reactivity = 0

### Other hazards

### Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

### Classification according to (d)(1)(ii) of § 1910.1200

The SDS issuer does not object to the classifications provided by importers or manufacturers of precursor products.

### Hazards not otherwise classified

There are no adverse physical or health effects known that are not covered by the hazard classes of the Hazard Communications Standard.

## 3 Composition/information on ingredients

### Chemical characterization: Substances

### CAS No. Description

CAS: 33467-73-1 cis-3-Hexenyl formate

### Identification number(s)

EC number: 251-532-7

## 4 First-aid measures

### Description of first aid measures

- General information:** Immediately remove any clothing soiled by the product.
- After inhalation:** Supply fresh air; consult doctor in case of complaints.
- After skin contact:** Immediately rinse with water.
- After eye contact:** Rinse opened eye for several minutes under running water.
- After swallowing:** If symptoms persist consult doctor.

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- **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.
- **Additional information**  
Cool endangered receptacles with water spray.  
Collect contaminated fire fighting water separately. It must not enter the sewage system.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to section 13.  
Ensure adequate ventilation.
- **Protective Action Criteria for Chemicals**

### · PAC-1:

Substance is not listed.

### · PAC-2:

Substance is not listed.

### · PAC-3:

Substance is not listed.

### · **Reference to other sections**

See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## 7 Handling and storage

- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Please refer to the product specification and/or Certificate of Analysis for product storage requirements.

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- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s):** No further relevant information available.

## 8 Exposure controls/personal protection

- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as a basis.
- **Exposure controls**
- **Appropriate engineering controls:** No further data; see section 7.
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.
- **Breathing equipment:** Not required.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material should be based on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **Penetration time of glove material**

The exact break through time has to be determined by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Physical state**

Liquid

- **Color:**

According to product specification

- **Odor:**

According to product specification

- **Odor threshold:**

Not determined.

- **Melting point/Melting range:**

Undetermined.

- **Boiling point/Boiling range:**

154-156 °C (309.2-312.8 °F)

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|                                                                                        |                                                                                            |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| · <b>Flammability:</b>                                                                 | Flammable.                                                                                 |
| · <b>Explosion limits:</b>                                                             |                                                                                            |
| · <b>Lower:</b>                                                                        | Not determined.                                                                            |
| · <b>Upper:</b>                                                                        | Not determined.                                                                            |
| · <b>Flash point:</b>                                                                  | 43 °C (109.4 °F)                                                                           |
| · <b>Decomposition temperature:</b>                                                    | Not determined.                                                                            |
| · <b>pH-value:</b>                                                                     | Not determined.                                                                            |
| · <b>Viscosity:</b>                                                                    |                                                                                            |
| · <b>Kinematic:</b>                                                                    | Not determined.                                                                            |
| · <b>Dynamic:</b>                                                                      | Not determined.                                                                            |
| · <b>Solubility in / Miscibility with</b>                                              |                                                                                            |
| · <b>Water:</b>                                                                        | Not miscible or difficult to mix.                                                          |
| · <b>Partition coefficient (n-octanol/water):</b>                                      | Not determined.                                                                            |
| · <b>Vapor pressure:</b>                                                               | Not determined.                                                                            |
| · <b>Vapor pressure:</b>                                                               |                                                                                            |
| · <b>Density at 20 °C (68 °F):</b>                                                     | 0.915 g/cm <sup>3</sup> (7.63568 lbs/gal)                                                  |
| · <b>Relative density</b>                                                              | Not determined.                                                                            |
| · <b>Refractive Index</b>                                                              |                                                                                            |
| · <b>Vapor density</b>                                                                 | Not determined.                                                                            |
| · <b>Particle characteristics</b>                                                      | Not applicable.                                                                            |
| · <b>Other information</b>                                                             |                                                                                            |
| · <b>Appearance:</b>                                                                   |                                                                                            |
| · <b>Form:</b>                                                                         | Liquid                                                                                     |
| · <b>Important information on protection of health and environment, and on safety.</b> |                                                                                            |
| · <b>Ignition temperature:</b>                                                         | Not determined.                                                                            |
| · <b>Danger of explosion:</b>                                                          | Product is not explosive. However, formation of explosive air/vapor mixtures are possible. |
| · <b>VOC content:</b>                                                                  | 0.00 %<br>0.0 g/l / 0.00 lb/gal                                                            |
| · <b>Change in condition</b>                                                           |                                                                                            |
| · <b>Evaporation rate</b>                                                              | Not determined.                                                                            |

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

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## 11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

**CAS: 33467-73-1 cis-3-Hexenyl formate**

|        |      |                    |
|--------|------|--------------------|
| Oral   | LD50 | >5,000 mg/kg (rat) |
| Dermal | LD50 | >5,000 mg/kg (rab) |

· **Primary irritant effect:**

· **on the skin:** No irritant effect.

· **on the eye:** No irritating effect.

· **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

· **Interactive effects** No interactive effects between components are known.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

Substance is not listed.

· **NTP (National Toxicology Program)**

Substance is not listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

· **Alternative sources for toxicological information**

No non-standard sources for toxicological information where used.

## 12 Ecological information

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects**

· **Additional ecological information:**

· **General notes:**

Water hazard class 2 (Assessment by list): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

## 13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

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- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

|                                                                                     |                                                                                                                  |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| · UN-Number                                                                         | UN3272                                                                                                           |
| · DOT, IMDG, IATA                                                                   |                                                                                                                  |
| · UN proper shipping name                                                           | Esters, n.o.s. (cis-3-Hexenyl formate)                                                                           |
| · DOT                                                                               | ESTERS, N.O.S. (cis-3-Hexenyl formate)                                                                           |
| · IMDG, IATA                                                                        |                                                                                                                  |
| · Transport hazard class(es)                                                        |                                                                                                                  |
| · DOT                                                                               |                                                                                                                  |
|    |                                                                                                                  |
| · Class                                                                             | 3 Flammable liquids                                                                                              |
| · Label                                                                             | 3                                                                                                                |
| · IMDG, IATA                                                                        |                                                                                                                  |
|  |                                                                                                                  |
| · Class                                                                             | 3 Flammable liquids                                                                                              |
| · Label                                                                             | 3                                                                                                                |
| · Packing group                                                                     | III                                                                                                              |
| · DOT, IMDG, IATA                                                                   |                                                                                                                  |
| · Environmental hazards:                                                            |                                                                                                                  |
| · Marine pollutant:                                                                 | No                                                                                                               |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code           | Not applicable.                                                                                                  |
| · Transport/Additional information:                                                 |                                                                                                                  |
| · DOT                                                                               |                                                                                                                  |
| · Quantity limitations                                                              | On passenger aircraft/rail: 60 L<br>On cargo aircraft only: 220 L                                                |
| · IMDG                                                                              |                                                                                                                  |
| · Limited quantities (LQ)                                                           | 5L                                                                                                               |
| · Excepted quantities (EQ)                                                          | Code: E1<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 1000 ml |
| · Special precautions for user                                                      | Warning: Flammable liquids                                                                                       |

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|                                 |                                                        |
|---------------------------------|--------------------------------------------------------|
| · <b>Stowage Category</b>       | A                                                      |
| · <b>UN "Model Regulation":</b> | UN 3272 ESTERS, N.O.S. (CIS-3-HEXENYL FORMATE), 3, III |

## 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

### · Section 355 (extremely hazardous substances):

Substance is not listed.

### · Section 313 (Specific toxic chemical listings):

Substance is not listed.

### · TSCA (Toxic Substances Control Act):

ACTIVE

### · Hazardous Air Pollutants

Substance is not listed.

### · Proposition 65

### · Chemicals known to cause cancer:

Substance is not listed.

### · Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

### · Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

### · Chemicals known to cause developmental toxicity:

Substance is not listed.

### · Carcinogenic categories

### · EPA (Environmental Protection Agency)

Substance is not listed.

### · TLV (Threshold Limit Value)

Substance is not listed.

### · NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is not listed.

### · GHS label elements

Pictograms on label shall be in the shape of a square set at a point and shall include a black hazard symbol on a white background with a red frame sufficiently wide to be clearly visible.

The substance is classified and labeled according to the Globally Harmonized System (GHS).

### · Hazard pictograms



GHS02

- **Signal word** Warning

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· **Hazard statements**

H226 Flammable liquid and vapor.

· **Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P241 Use explosion-proof [electrical/ventilating/lighting] equipment.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P403+P235 Store in a well-ventilated place. Keep cool.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Product Safety Department

· **Contact:**

Product Safety Department  
productsafety@adv-bio.com

· **Date of previous version** 01/10/2023

· **Date of preparation** 01/24/2025

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Flammable liquids 3: Flammable liquids – Category 3

US