



DE HEKSERIJ

# cis-3-Hexenyl acetate

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878  
Issue date: 8/21/2024 Revision date: 1/22/2026 Supersedes version of: 8/21/2024 Version: 2.0

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form	: Substance
Substance name	: cis-3-Hexenyl acetate
IUPAC name	: (Z)-hex-3-enyl acetate
EC-No.	: 222-960-1
CAS-No.	: 3681-71-8
REACH registration No.	: 01-2119969742-25
Product code	: 23180
Formula	: C <sub>8</sub> H <sub>14</sub> O <sub>2</sub>
Product group	: Trade product

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

##### Relevant identified uses

Intended for general public	
Main use category	: Professional use, Consumer use
Use of the substance/mixture	: Fragrance raw material

#### 1.3. Details of the supplier of the safety data sheet

De Hekserij  
Sporstraat 57  
8271 RG IJsselmuiden  
Nederland  
T +31 383 557 927  
[hekserij@hekserij.nl](mailto:hekserij@hekserij.nl), [www.hekserij.nl](http://www.hekserij.nl)

#### 1.4. Emergency telephone number

No additional information available

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, Category 3 H226  
Full text of H- and EUH-statements: see section 16

##### Adverse physicochemical, human health and environmental effects

Flammable liquid and vapour.

#### 2.2. Label elements

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS02

Signal word (CLP)

: Warning

Hazard statements (CLP)

: H226 - Flammable liquid and vapour.

Precautionary statements (CLP)

: P102 - Keep out of reach of children.  
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.  
No smoking.  
P233 - Keep container tightly closed.  
P280 - Wear protective gloves.

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P370+P378 - In case of fire: Use carbon dioxide (CO<sub>2</sub>), foam, dry extinguishing powder to extinguish.

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

P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 2.3. Other hazards

Contains no PBT and/or vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Substance type : Mono-constituent  
Name : cis-3-Hexenyl acetate  
CAS-No. : 3681-71-8  
EC-No. : 222-960-1

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
(Z)-hex-3-enyl acetate	CAS-No.: 3681-71-8 EC-No.: 222-960-1	100	Flam. Liq. 3, H226

Full text of H- and EUH-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice.  
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.  
First-aid measures after skin contact : Rinse skin with water/shower. Take off immediately all contaminated clothing.  
First-aid measures after eye contact : Rinse eyes with water as a precaution.  
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.  
Self protection of the first-aiders : First aid workers will be equipped with suitable personal protective equipment.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : None under normal conditions.  
Symptoms/effects after skin contact : None under normal conditions.  
Symptoms/effects after eye contact : None under normal conditions.  
Symptoms/effects after ingestion : None under normal conditions.

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.  
Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapour.  
Explosion hazard : No direct explosion hazard.  
Hazardous decomposition products in case of fire : Toxic fumes may be released.

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### 5.3. Advice for firefighters

- |                                |   |
|--------------------------------|---|
| Firefighting instructions      | : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection. |
| Protection during firefighting | : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.              |

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

- |                  |  |
|------------------|--|
| General measures | : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters.<br>Absorb spillage to prevent material damage. |
|------------------|--|

#### For non-emergency personnel

- |                      |   |
|----------------------|---|
| Protective equipment | : Wear recommended personal protective equipment.                     |
| Emergency procedures | : Ventilate spillage area. No open flames, no sparks, and no smoking. |

#### For emergency responders

- |                      |   |
|----------------------|---|
| Protective equipment | : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". |
| Emergency procedures | : Evacuate unnecessary personnel. Stop leak if safe to do so.   |

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

- |                         |   |
|-------------------------|---|
| For containment         | : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible. |
| Methods for cleaning up | : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.   |
| Other information       | : Dispose of materials or solid residues at an authorized site.   |

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- |                                   |   |
|-----------------------------------|---|
| Additional hazards when processed | : Not expected to present a significant hazard under anticipated conditions of normal use.  |
| Precautions for safe handling     | : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. |
| Hygiene measures                  | : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.   |

### 7.2. Conditions for safe storage, including any incompatibilities

- |                     |   |
|---------------------|---|
| Technical measures  | : Ground/bond container and receiving equipment.                              |
| Storage conditions  | : Store in a well-ventilated place. Keep cool. Keep container tightly closed. |
| Packaging materials | : Store always product in container of same material as original container.   |

### 7.3. Specific end use(s)

No additional information available

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### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### DNEL and PNEC

###### cis-3-Hexenyl acetate (3681-71-8)

###### DNEL/DMEL (Workers)

Long-term - systemic effects, dermal	3.33 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	11.75 mg/m <sup>3</sup>

###### DNEL/DMEL (General population)

Long-term - systemic effects, oral	1.67 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	2.9 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	1.67 mg/kg bodyweight/day

#### 8.2. Exposure controls

##### Appropriate engineering controls

###### Appropriate engineering controls:

Ensure good ventilation of the work station.

##### Personal protection equipment

###### Personal protective equipment:

Wear recommended personal protective equipment.

###### Personal protective equipment symbol(s):



##### Eye and face protection

###### Eye protection:

Safety glasses

##### Skin protection

###### Skin and body protection:

Wear suitable protective clothing

###### Hand protection:

Protective gloves

##### Respiratory protection

###### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

##### Environmental exposure controls

###### Environmental exposure controls:

Avoid release to the environment.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: colourless to pale yellow.
Odour	: Not available
Odour threshold	: Not available
Melting point	: < -20 °C

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Freezing point	: Not available
Boiling point	: 169 °C
Flammability	: Flammable liquid and vapour.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 57.144 °C Atm. press.: 101,325 kPa
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Insoluble in water.
Partition coefficient n-octanol/water (Log Kow)	: 2.42
Vapour pressure	: 214 Pa Temp.: 25 °C
Vapour pressure at 50°C	: Not available
Density	: 0.896 – 0.905 g/ml Temp.: 20 °C
Relative density	: 0.899 Type: 'relative density' Temp.: 20 °C
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Flammable liquid and vapour.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

(Z)-hex-3-enyl acetate (3681-71-8)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 420 (Acute Oral Toxicity - Fixed Dose Method), Guideline: EU Method B.1 bis (Acute Oral Toxicity - Fixed Dose Procedure)
LC50 Inhalation - Rat	> 5.92 mg/l air Animal: rat, Guideline: OECD Guideline 436 (Acute Inhalation Toxicity: Acute Toxic Class Method)

Skin corrosion/irritation	: Not classified
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Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified

### (Z)-hex-3-enyl acetate (3681-71-8)

NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
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Aspiration hazard	: Not classified
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### 11.2. Information on other hazards

No additional information available

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified.

### (Z)-hex-3-enyl acetate (3681-71-8)

LC50 - Fish [1]	13 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	31 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	85 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	47 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)

### 12.2. Persistence and degradability

#### cis-3-Hexenyl acetate (3681-71-8)

Persistence and degradability	Not rapidly degradable
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#### (Z)-hex-3-enyl acetate (3681-71-8)

Persistence and degradability	Not rapidly degradable
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### 12.3. Bioaccumulative potential

#### cis-3-Hexenyl acetate (3681-71-8)

Partition coefficient n-octanol/water (Log Kow)	2.42
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### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

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### 12.6. Endocrine disrupting properties

No additional information available

### 12.7. Other adverse effects

No additional information available






## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Flammable vapours may accumulate in the container. Do not re-use empty containers.

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
UN 3272	UN 3272	UN 3272	UN 3272	UN 3272
<b>14.2. UN proper shipping name</b>				
ESTERS, N.O.S. (cis-3-Hexenyl acetate)	ESTERS, N.O.S. (cis-3-Hexenyl acetate)	Esters, n.o.s. (cis-3-Hexenyl acetate)	ESTERS, N.O.S. (cis-3-Hexenyl acetate)	ESTERS, N.O.S. (cis-3-Hexenyl acetate)
<b>Transport document description</b>				
UN 3272 ESTERS, N.O.S. (cis-3-Hexenyl acetate), 3, III, (D/E)	UN 3272 ESTERS, N.O.S. (cis-3-Hexenyl acetate), 3, III	UN 3272 Esters, n.o.s. (cis-3-Hexenyl acetate), 3, III	UN 3272 ESTERS, N.O.S. (cis-3-Hexenyl acetate), 3, III	UN 3272 ESTERS, N.O.S. (cis-3-Hexenyl acetate), 3, III
<b>14.3. Transport hazard class(es)</b>				
3	3	3	3	3
				
<b>14.4. Packing group</b>				
III	III	III	III	III
<b>14.5. Environmental hazards</b>				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No EmS-No. (Fire): F-E EmS-No. (Spillage): S-D	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

### 14.6. Special precautions for user

#### Overland transport

Classification code (ADR)	: F1
Special provisions (ADR)	: 274, 601
Limited quantities (ADR)	: 5I

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Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T4
Portable tank and bulk container special provisions (ADR)	: TP1, TP29
Tank code (ADR)	: LGBF
Vehicle for tank carriage	: FL
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Special provisions for carriage - Operation (ADR)	: S2
Hazard identification number (Kemler No.)	: 30
Orange plates	:



Tunnel restriction code (ADR)	: D/E
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### Transport by sea

Special provisions (IMDG)	: 223, 274
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1, TP29
Stowage category (IMDG)	: A

### Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y344
PCA limited quantity max net quantity (IATA)	: 10L
PCA packing instructions (IATA)	: 355
PCA max net quantity (IATA)	: 60L
CAO packing instructions (IATA)	: 366
CAO max net quantity (IATA)	: 220L
Special provisions (IATA)	: A3
ERG code (IATA)	: 3L

### Inland waterway transport

Classification code (ADN)	: F1
Special provisions (ADN)	: 274, 601
Limited quantities (ADN)	: 5 L
Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EX, A
Ventilation (ADN)	: VE01
Number of blue cones/lights (ADN)	: 0

### Rail transport

Classification code (RID)	: F1
Special provisions (RID)	: 274, 601
Limited quantities (RID)	: 5L
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P001, IBC03, LP01, R001
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T4
Portable tank and bulk container special provisions (RID)	: TP1, TP29
Tank codes for RID tanks (RID)	: LGBF
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W12



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Colis express (express parcels) (RID) : CE4  
Hazard identification number (RID) : 30

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

## SECTION 15: Regulatory information

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

#### EU-Regulations

##### REACH Annex XVII (Restriction List)

##### EU restriction list (REACH Annex XVII)

Reference code	Applicable on	Entry title or description
3(a)	cis-3-Hexenyl acetate ; (Z)-hex-3-enyl acetate	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F

##### REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

##### REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

##### PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

##### POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

##### Ozone Regulation (2024/590)

Not listed on the Ozone Depletion list (Regulation EU 2024/590)

##### Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

##### Explosives Precursors Regulation (EU 2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

##### Drug Precursors Regulation (EC 273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

#### National regulations

##### Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed  
SZW-lijst van mutagene stoffen : The substance is not listed  
SZW-lijst van reprotoxische stoffen – Borstvoeding : The substance is not listed  
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : The substance is not listed  
SZW-lijst van reprotoxische stoffen – Ontwikkeling : The substance is not listed

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

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### SECTION 16: Other information

#### Abbreviations and acronyms:

ACGIH	American Conference of Government Industrial Hygienists
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
COD	Chemical oxygen demand (COD)
CSA	Chemical safety assessment
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
ED	Endocrine disruptor
EN	European Standard
EWC	European waste catalogue
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
Log Kow	Partition coefficient n-octanol/water (Log Kow)
Log Pow	Partition coefficient n-octanol/water (Log Pow)
MAK	maximum workplace concentration
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
N.O.S.	Not Otherwise Specified
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
OSHA	Occupational Safety Health Administration
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
PPE	Personal protection equipment

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### Abbreviations and acronyms:

RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
TF	Technical function
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
TWA	Time Weighted Average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative
UFI	Unique Formula Identifier

### Full text of H- and EUH-statements:

Flam. Liq. 3	Flammable liquids, Category 3
H226	Flammable liquid and vapour.

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.