

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**NATURAL TRANS-2-HEXENAL**

Revision date: 02.08.2023

Product code: 256020

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

NATURAL TRANS-2-HEXENAL

Substance name: NATURAL TRANS-2-HEXENAL  
CAS No: 6728-26-3  
EC No: 229-778-1

**1.2. Relevant identified uses of the substance or mixture and uses advised against****Use of the substance/mixture**

Manufacturing of: - Air care products - Perfumes, fragrances - Pharmaceuticals - Cosmetics, personal care products - Flavouring Substances - Other

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

Company name: Axxence Aromatic GmbH  
Street: Tackenweide 28  
Place: D-46446 Emmerich am Rhein  
Telephone: + 49 2822 68561 0  
e-mail: info@axxence.com  
Contact person: Andreas Goertz  
e-mail: andreas.goertz@axxence.com  
Internet: www.axxence.de  
Responsible Department: QM - Regulatory Affairs

Telefax: + 49 2822 68561 39

Telephone: + 49 2822 68561 37

**1.4. Emergency telephone number:**

+49 2822 68561 99

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Flam. Liq. 3; H226  
Acute Tox. 3; H311  
Acute Tox. 4; H302  
Eye Irrit. 2; H319  
Skin Sens. 1B; H317

Full text of hazard statements: see SECTION 16.

**2.2. Label elements****Regulation (EC) No 1272/2008****Signal word:** Danger**Pictograms:****Hazard statements**

H226 Flammable liquid and vapour.  
H302 Harmful if swallowed.  
H311 Toxic in contact with skin.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.

**Precautionary statements**

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

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smoking.	
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P330	Rinse mouth.
P302+P352	IF ON SKIN: Wash with plenty of water.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P312	Call a POISON CENTER/doctor if you feel unwell.
P361+P364	Take off immediately all contaminated clothing and wash it before reuse.
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 Water spray jet / Carbon dioxide (CO2) / Foam / Extinguishing powder to extinguish.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container to .

### 2.3. Other hazards

This substance is identified as SVHC (substance of very high concern) and is subject to autorisation according to Annex XIV of REACH. This substance has been listed as SVHC (substance of very high concern) in the Candidate List according to Article 59 of REACH.

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Sum formula:	C6 H10 O
Molecular weight:	98,14

#### Hazardous components

CAS No	Chemical name	Quantity
	EC No	
	Index No	
	REACH No	
	Classification (Regulation (EC) No 1272/2008)	
6728-26-3	NATURAL TRANS-2-HEXENAL	100 %
	229-778-1	
	Flam. Liq. 3, Acute Tox. 3, Acute Tox. 4, Eye Irrit. 2, Skin Sens. 1B; H226 H311 H302 H319 H317	

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

#### Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
6728-26-3	229-778-1	NATURAL TRANS-2-HEXENAL	100 %
		dermal: LD50 = 600 mg/kg; oral: LD50 = 780 mg/kg	

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#### SECTION 4: First aid measures

##### 4.1. Description of first aid measures

###### General information

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down.

###### After inhalation

Provide fresh air. When in doubt or if symptoms are observed, get medical advice.

###### After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. Call a physician immediately.

###### After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

###### After ingestion

Observe risk of aspiration if vomiting occurs. If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.

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

No information available.

##### 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

Carbon dioxide (CO<sub>2</sub>), Foam, Extinguishing powder.

###### Unsuitable extinguishing media

Water.

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

Flammable. Vapours can form explosive mixtures with air.

##### 5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

###### Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

#### SECTION 6: Accidental release measures

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

###### General advice

Remove all sources of ignition. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

##### 6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Explosion risk.

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

###### For cleaning up

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

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#### Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

#### 6.4. Reference to other sections

Safe handling: see section 7  
 Personal protection equipment: see section 8  
 Disposal: see section 13

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

##### Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

##### Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air.

##### Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff. Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff.

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

##### Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaust at critical locations. Keep in a cool, well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

##### Hints on joint storage

Do not store together with: Oxidizing agent. Pyrophoric or self-heating substances.

#### 7.3. Specific end use(s)

Manufacturing of: - Air care products - Perfumes, fragrances - Pharmaceuticals - Cosmetics, personal care products - Flavouring Substances - Other

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

#### 8.2. Exposure controls



##### Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

##### Individual protection measures, such as personal protective equipment

##### Eye/face protection

Suitable eye protection: goggles.

##### Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four

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control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Suitable gloves type: Butyl caoutchouc (butyl rubber) / FKM (fluoro rubber)

#### Skin protection

Use of protective clothing.

#### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

### SECTION 9: Physical and chemical properties

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

Physical state:	Liquid
Colour:	
Melting point/freezing point:	-78 °C
Boiling point or initial boiling point and boiling range:	147 °C
Flammability:	not determined
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	38 °C
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH-Value:	not determined
Water solubility: (at 25 °C)	5,26 g/L
Solubility in other solvents	not determined
Partition coefficient n-octanol/water:	1,58
Vapour pressure: (at 20 °C)	13 hPa
Density (at 20 °C):	0,84 g/cm <sup>3</sup>
Relative vapour density: (at 20 °C)	3,4

#### 9.2. Other information

##### Information with regard to physical hazard classes

Explosive properties

The product is not: Explosive. not explosive according to EU A.14

Oxidizing properties

The product is not: oxidising.

##### Other safety characteristics

Evaporation rate:	not determined
Solvent content:	0%
Solid content:	0%

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Flammable.

#### 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

#### 10.3. Possibility of hazardous reactions

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No known hazardous reactions.

#### **10.4. Conditions to avoid**

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.

#### **10.5. Incompatible materials**

No information available.

#### **10.6. Hazardous decomposition products**

No known hazardous decomposition products.

### SECTION 11: Toxicological information

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

##### **Acute toxicity**

Toxic in contact with skin.  
Harmful if swallowed.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
6728-26-3	NATURAL TRANS-2-HEXENAL				
	oral	LD50 mg/kg 780	Rat	REACH Dossier	
	dermal	LD50 mg/kg 600	Rabbit		

##### **Irritation and corrosivity**

Causes serious eye irritation.  
Skin corrosion/irritation: Based on available data, the classification criteria are not met.

##### **Sensitising effects**

May cause an allergic skin reaction. (NATURAL TRANS-2-HEXENAL)

##### **Carcinogenic/mutagenic/toxic effects for reproduction**

Based on available data, the classification criteria are not met.

##### **STOT-single exposure**

Based on available data, the classification criteria are not met.

##### **STOT-repeated exposure**

Based on available data, the classification criteria are not met.

##### **Aspiration hazard**

Based on available data, the classification criteria are not met.

#### **11.2. Information on other hazards**

##### **Endocrine disrupting properties**

No information available.

### SECTION 12: Ecological information

#### **12.1. Toxicity**

The product is not: Ecotoxic.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
6728-26-3	NATURAL TRANS-2-HEXENAL					
	Acute algae toxicity	ErC50 mg/l	8,16	72 h	Pseudokirchneriella subcapitata	REACH registration  QSAR Predictions
	Acute crustacea toxicity	EC50 mg/l	22,8	48 h	Daphnia magna (Big water flea)	REACH registration  OECD Toolbox software

#### **12.2. Persistence and degradability**

The product has not been tested.

#### **12.3. Bioaccumulative potential**

The product has not been tested.

#### **Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
6728-26-3	NATURAL TRANS-2-HEXENAL	1,58

#### **12.4. Mobility in soil**

The product has not been tested.

#### **12.5. Results of PBT and vPvB assessment**

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

The product has not been tested.

#### **12.6. Endocrine disrupting properties**

This substance does not have endocrine disrupting properties with respect to non-target organisms.

#### **12.7. Other adverse effects**

No information available.

#### **Further information**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

### SECTION 13: Disposal considerations

#### **13.1. Waste treatment methods**

##### **Disposal recommendations**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

##### **List of Wastes Code - residues/unused products**

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances; hazardous waste

##### **List of Wastes Code - used product**

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances; hazardous waste

##### **List of Wastes Code - contaminated packaging**

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

##### **Contaminated packaging**

Hazardous waste according to Directive 2008/98/EC (waste framework directive). Handle contaminated packages in the same way as the substance itself.

### SECTION 14: Transport information

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#### Land transport (ADR/RID)

**14.1. UN number or ID number:** UN 1988  
**14.2. UN proper shipping name:** ALDEHYDES, FLAMMABLE, TOXIC, N.O.S.  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** III  
 Hazard label: 3+6.1



Classification code: FT1  
 Special Provisions: 274  
 Limited quantity: 5 L  
 Excepted quantity: E1  
 Transport category: 3  
 Hazard No: 36  
 Tunnel restriction code: D/E

#### Other applicable information (land transport)

E1

#### Inland waterways transport (ADN)

**14.1. UN number or ID number:** UN 1988  
**14.2. UN proper shipping name:** ALDEHYDES, FLAMMABLE, TOXIC, N.O.S.  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** III  
 Hazard label: 3+6.1



Classification code: FT1  
 Special Provisions: 274 802  
 Limited quantity: 5 L  
 Excepted quantity: E1

#### Other applicable information (inland waterways transport)

E1

#### Marine transport (IMDG)

**14.1. UN number or ID number:** UN 1988  
**14.2. UN proper shipping name:** ALDEHYDES, FLAMMABLE, TOXIC, N.O.S.  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** III  
 Hazard label: 3+6.1



Special Provisions: 223 274  
 Limited quantity: 5 L  
 Excepted quantity: E1  
 EmS: F-E, S-D

#### Air transport (ICAO-TI/IATA-DGR)

**14.1. UN number or ID number:** UN 1988  
**14.2. UN proper shipping name:** ALDEHYDES, FLAMMABLE, TOXIC, N.O.S.  
**14.3. Transport hazard class(es):** 3  
**14.4. Packing group:** III



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Hazard label:	3+6.1	 
Special Provisions:	A3	
Limited quantity Passenger:	2 L	
Passenger LQ:	Y343	
Excepted quantity:	E1	
IATA-packing instructions - Passenger:		355
IATA-max. quantity - Passenger:		60 L
IATA-packing instructions - Cargo:		366
IATA-max. quantity - Cargo:		220 L

#### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes



Danger releasing substance: NATURAL TRANS-2-HEXENAL

#### 14.6. Special precautions for user

Warning: Combustible liquid. Acute Toxicity.

#### 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 regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 40

2010/75/EU (VOC):	100 % (840 g/l)
2004/42/EC (VOC):	100 % (840 g/l)
Information according to 2012/18/EU (SEVESO III):	P5c FLAMMABLE LIQUIDS

##### National regulatory information

Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
Water hazard class (D):	2 - obviously hazardous to water
Skin resorption/Sensitization:	Permeates easily through outer skin and causes poisoning. Causes allergic hypersensitivity reactions.

#### 15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

### SECTION 16: Other information

#### Changes

This data sheet contains changes from the previous version in section(s): 1,2,5,6,7,8,9,11,12,14,15,16.

#### Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route  
(European Agreement concerning the International Carriage of Dangerous Goods by Road)

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IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service  
LC50: Lethal concentration, 50%  
LD50: Lethal dose, 50%  
CLP: Classification, labelling and Packaging  
REACH: Registration, Evaluation and Authorization of Chemicals  
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals  
UN: United Nations  
DNEL: Derived No Effect Level  
DMEL: Derived Minimal Effect Level  
PNEC: Predicted No Effect Concentration  
ATE: Acute toxicity estimate  
LL50: Lethal loading, 50%  
EL50: Effect loading, 50%  
EC50: Effective Concentration 50%  
ErC50: Effective Concentration 50%, growth rate  
NOEC: No Observed Effect Concentration  
BCF: Bio-concentration factor  
PBT: persistent, bioaccumulative, toxic  
vPvB: very persistent, very bioaccumulative  
RID: Regulations concerning the international carriage of dangerous goods by rail  
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)  
EmS: Emergency Schedules  
MFAG: Medical First Aid Guide  
ICAO: International Civil Aviation Organization  
MARPOL: International Convention for the Prevention of Marine Pollution from Ships  
IBC: Intermediate Bulk Container  
VOC: Volatile Organic Compounds  
SVHC: Substance of Very High Concern  
For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>  
For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

**Relevant H and EUH statements (number and full text)**

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

**Further Information**

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.