

Safety Data Sheet

according to UN GHS (ST/SG/AC.10/11/Rev.9)

NATURAL TRANS-2-HEXENAL

Revision date: 02.08.2023

Product code: 256020WW

Page 1 of 9

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

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	Telefax: + 49 2822 68561 39
e-mail:	info@axxence.com	
Contact person:	Andreas Goertz	Telephone: + 49 2822 68561 37
e-mail:	andreas.goertz@axxence.com	
Internet:	www.axxence.de	
Responsible Department:	QM - Regulatory Affairs	

1.4. Emergency telephone number:

+49 2822 68561 99

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

UN GHS (ST/SG/AC.10/11/Rev.9)

Flammable liquid: Flam. Liq. 3
 Acute toxicity: Acute Tox. 3 (dermal)
 Acute toxicity: Acute Tox. 4 (oral)
 Skin corrosion/irritation: Skin Irrit. 3
 Serious eye damage/eye irritation: Eye Irrit. 2
 Respiratory or skin sensitisation: Skin Sens. 1B
 Hazardous to the aquatic environment: Aquatic Acute 2

2.2. Label elements

UN GHS (ST/SG/AC.10/11/Rev.9)

Signal word: Danger

Pictograms:



Hazard statements

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H316	Causes mild skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H401	Toxic to aquatic life.

Safety Data Sheet

according to UN GHS (ST/SG/AC.10/11/Rev.9)

NATURAL TRANS-2-HEXENAL

Revision date: 02.08.2023

Product code: 256020WW

Page 2 of 9

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No 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.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301+P317	IF SWALLOWED: Get medical help.
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.
P316	Get emergency medical help immediately.
P333+P317	If skin irritation or rash occurs: Get medical help.
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+P317	If eye irritation persists: Get medical help.
P370+P378	In case of fire: Use Water spray jet / Carbon dioxide (CO ₂) / 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 authorisation 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:	C ₆ H ₁₀ O
Molecular weight:	98,14

Hazardous components

CAS No	Chemical name	Quantity
	Classification (UN GHS (ST/SG/AC.10/11/Rev.9))	
6728-26-3	NATURAL TRANS-2-HEXENAL	100 %
	Flam. Liq. 3, Acute Tox. 3, Acute Tox. 4, Skin Irrit. 3, Eye Irrit. 2, Skin Sens. 1B, Aquatic Acute 2; H226 H311 H302 H316 H319 H317 H401	

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.

Safety Data Sheet

according to UN GHS (ST/SG/AC.10/11/Rev.9)

NATURAL TRANS-2-HEXENAL

Revision date: 02.08.2023

Product code: 256020WW

Page 3 of 9

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 (CO₂), 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.

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

Safety Data Sheet

according to UN GHS (ST/SG/AC.10/11/Rev.9)

NATURAL TRANS-2-HEXENAL

Revision date: 02.08.2023

Product code: 256020WW

Page 4 of 9

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 exhaustion 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.

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 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.

Safety Data Sheet

according to UN GHS (ST/SG/AC.10/11/Rev.9)

NATURAL TRANS-2-HEXENAL

Revision date: 02.08.2023

Product code: 256020WW

Page 5 of 9

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:	5,26 g/L
(at 25 °C)	
Solubility in other solvents	
not determined	
Partition coefficient n-octanol/water:	1,58
Vapour pressure:	13 hPa
(at 20 °C)	
Density (at 20 °C):	0,84 g/cm ³
Relative vapour density:	3,4
(at 20 °C)	

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

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.

Safety Data Sheet

according to UN GHS (ST/SG/AC.10/11/Rev.9)

NATURAL TRANS-2-HEXENAL

Revision date: 02.08.2023

Product code: 256020WW

Page 6 of 9

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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 mild skin irritation.

Causes serious eye irritation.

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.

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
	Acute crustacea toxicity	EC50 mg/l	22,8	48 h	Daphnia magna (Big water flea)	REACH registration
						QSAR Predictions
						OECD Toolbox software

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

Safety Data Sheet

according to UN GHS (ST/SG/AC.10/11/Rev.9)

NATURAL TRANS-2-HEXENAL

Revision date: 02.08.2023

Product code: 256020WW

Page 7 of 9

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.

12.6. 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.

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

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
 Hazard label: 3+6.1



Special Provisions: A3
 Limited quantity Passenger: 2 L
 Passenger LQ: Y343
 Excepted quantity: E1
 IATA-packing instructions - Passenger: 355

Safety Data Sheet

according to UN GHS (ST/SG/AC.10/11/Rev.9)

NATURAL TRANS-2-HEXENAL

Revision date: 02.08.2023

Product code: 256020WW

Page 8 of 9

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

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.
Skin resorption/Sensitization:	Permeates easily through outer skin and causes poisoning. Causes allergic hypersensitivity reactions.

SECTION 16: Other information

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)
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

Safety Data Sheet

according to UN GHS (ST/SG/AC.10/11/Rev.9)

NATURAL TRANS-2-HEXENAL

Revision date: 02.08.2023

Product code: 256020WW

Page 9 of 9

(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).

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.