

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

1-Hexanol

Creation date	12th January 2022	Version	2.0
Revision date			

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

- 1.1. Product identifier**
- | | |
|----------------------|-----------------------|
| Substance / mixture | 1-Hexanol |
| Chemical name | substance |
| CAS number | hexan-1-ol |
| Index number | 111-27-3 |
| EC (EINECS) number | 603-059-00-6 |
| Registration number | 203-852-3 |
| Other substance name | 01-2119487967-12-xxxx |
| | Hexan-1-ol |
- 1.2. Relevant identified uses of the substance or mixture and uses advised against**
- Substance's intended use**
Chemical production, analytical chemistry, laboratory synthesis, industrial applications.
- Substance uses advised against**
The product should not be used in ways other than those referred in Section 1.
- 1.3. Details of the supplier of the safety data sheet**
- Dodavatel**
- | | |
|-----------------------------|--|
| Name or trade name | Ing. Petr Švec - PENTA s.r.o. |
| Address | Radiová 1122/1, Praha 10, 102 00
Czech Republic |
| Identification number (CRN) | 02096013 |
| VAT Reg No | CZ02096013 |
| Phone | +420 226 060 681 |
| E-mail | info@pentachemicals.eu |
| Web address | www.pentachemicals.eu |
- Competent person responsible for the safety data sheet**
- | | |
|--------|-------------------------------|
| Name | Ing. Petr Švec - PENTA s.r.o. |
| E-mail | info@pentachemicals.eu |
- 1.4. Emergency telephone number**
- European emergency number: 112

SECTION 2: Hazards identification

- 2.1. Classification of the substance or mixture**
- Classification of the substance in accordance with Regulation (EC) No 1272/2008**
- The substance is classified as dangerous.
- Flam. Liq. 3, H226
Acute Tox. 4, H302+H312
Eye Irrit. 2, H319
- Full text of all classifications and hazard statements is given in the section 16.
- Most serious adverse physico-chemical effects**
Flammable liquid and vapour.
- Most serious adverse effects on human health and the environment**
Causes serious eye irritation. Harmful if swallowed or in contact with skin.

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

1-Hexanol

Creation date 12th January 2022
Revision date Version 2.0

2.2. Label elements

Hazard pictogram



Signal word

Warning

Dangerous substance

hexan-1-ol
(Index: 603-059-00-6; CAS: 111-27-3)

Hazard statements

H226 Flammable liquid and vapour.
H319 Causes serious eye irritation.
H302+H312 Harmful if swallowed or in contact with skin.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P302+P352 IF ON SKIN: Wash with plenty of water and soap.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards

Substance does not meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

SECTION 3: Composition/information on ingredients

3.1. Substances

Chemical characterization

The substance specified below.

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
Index: 603-059-00-6 CAS: 111-27-3 EC: 203-852-3 Registration number: 01-2119487967-12-xxxx	substance main component hexan-1-ol	98	Flam. Liq. 3, H226 Acute Tox. 4, H302+H312 Eye Irrit. 2, H319	

Full text of all classifications and hazard statements is given in the section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet. If unconscious, put the person in the stabilized (recovery) position on his side with his head slightly bent backwards and make sure that airways are free; never induce vomiting. If the person vomits by himself, make sure that the vomit is not inhaled. In life threatening conditions first of all provide resuscitation of the affected person and ensure medical assistance. Respiratory arrest - provide artificial respiration immediately. Cardiac arrest - provide indirect cardiac massage immediately.

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

1-Hexanol

Creation date	12th January 2022	Version	2.0
Revision date			

If inhaled

Terminate the exposure immediately; move the affected person to fresh air. Protect the person against growing cold. Provide medical treatment if irritation, dyspnoea or other symptoms persist.

If on skin

Remove contaminated clothes. Wash the affected area with plenty of water, lukewarm if possible. Soap, soap solution or shampoo should be used if there is no skin injury. Provide medical treatment if skin irritation persists. Rinse skin with water or shower.

If in eyes

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. Rinsing should continue at least for 10 minutes. Provide medical treatment, specialized if possible.

If swallowed

Rinse out the mouth with clean water. Provide medical treatment.

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

If inhaled

Not expected.

If on skin

not available

If in eyes

Causes serious eye irritation.

If swallowed

Irritation, nausea.

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

Symptomatic treatment.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.

Unsuitable extinguishing media

Water - full jet.

5.2. Special hazards arising from the substance or mixture

In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage.

5.3. Advice for firefighters

Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. Use a self-contained breathing apparatus and full-body protective clothing. Closed containers with the product near the fire should be cooled with water. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Provide sufficient ventilation. The substance is flammable. Remove all ignition sources. Use personal protective equipment for work. Follow the instructions in the Sections 7 and 8. Prevent contact with skin and eyes.

6.2. Environmental precautions

Prevent contamination of the soil and entering surface or ground water.

6.3. Methods and material for containment and cleaning up

Spilled product should be covered with suitable (non-flammable) absorbing material (sand, diatomaceous earth, earth and other suitable absorption materials); to be contained in well closed containers and removed as per the Section 13. In the event of leakage of the substantial amount of the product, inform fire brigade and other competent bodies. After removal of the product, wash the contaminated site with plenty of water. Do not use solvents.

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

1-Hexanol

Creation date 12th January 2022
Revision date Version 2.0

6.4. Reference to other sections

See the Section 7, 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Prevent formation of gases and vapours in flammable or explosive concentrations. The product should be used only in the areas where it is not in contact with open fire and other ignition sources. Use non-sparking tools. Use of antistatic clothes and footwear is recommended. Prevent contact with skin and eyes. No smoking. Do not eat, drink or smoke when using this product. Wash hands and exposed parts of the body thoroughly after handling. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection. Ground and bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Take action to prevent static discharges.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose. Do not expose to sunlight. Keep container tightly closed. Keep cool.

The specific requirements or rules relating to the substance/mixture

Solvent vapours are heavier than air and accumulate especially near the floor where they may form an explosive mixture with the air.

7.3. Specific end use(s)

not available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL

hexan-1-ol

Workers / consumers	Route of exposure	Value	Effect	Determining method
Workers	Inhalation	220 mg/m ³	Systemic acute effects	
Workers	Dermal	125 mg/kg bw	Systemic acute effects	
Consumers	Inhalation	65 mg/m ³	Systemic acute effects	
Consumers	Dermal	75 mg/kg bw	Systemic acute effects	

PNEC

hexan-1-ol

Route of exposure	Value	Determining method
Seawater	0.256 mg/l	
Sea sediments	0.5 mg/kg	
Drinking water	2.6 mg/l	
Freshwater sediment	5.08 mg/kg	
Soil (agricultural)	2.8 mg/kg	
Microorganisms in wastewater treatment plants	63.2 mg/l	

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

1-Hexanol

Creation date	12th January 2022	Version	2.0
Revision date			

8.2. Exposure controls

Follow the usual measures intended for health protection at work and especially for good ventilation. This can be achieved only by local suction or efficient general ventilation. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

Eye/face protection

Protective goggles.

Skin protection

Hand protection: Protective gloves resistant to the product (nitrile rubber). Contaminated skin should be washed thoroughly. Other protection: Protective antistatic clothing made of natural fibres (cotton) or synthetic fibres resistant to elevated temperatures.

Respiratory protection

Halfmask with a filter against organic vapours in the poorly ventilated environment.

Thermal hazard

Not available.

Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	liquid
Colour	colourless
Odour	characteristic
Melting point/freezing point	-45 °C
Boiling point or initial boiling point and boiling range	155 °C
Flammability	data not available
Lower and upper explosion limit	
bottom	1,2 %
upper	7,7 %
Flash point	60 °C
Auto-ignition temperature	data not available
Decomposition temperature	data not available
pH	data not available
Kinematic viscosity	data not available
Solubility in water	data not available
Partition coefficient n-octanol/water (log value)	data not available
Vapour pressure	data not available
Density and/or relative density	
Density	0,82 g/cm ³
Form	liquid

9.2. Other information

not available

SECTION 10: Stability and reactivity

10.1. Reactivity

The substance is flammable.

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

Unknown.

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

1-Hexanol

Creation date 12th January 2022
Revision date Version 2.0

10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost.

10.5. Incompatible materials

Protect against strong acids, bases and oxidizing agents.

10.6. Hazardous decomposition products

Not developed under normal uses. Dangerous outcomes such as carbon monoxide and carbon dioxide are formed at high temperature and in fire.

SECTION 11: Toxicological information

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

No toxicological data is available for the substance.

Acute toxicity

Harmful if swallowed or in contact with skin.

hexan-1-ol

Route of exposure	Parameter	Method	Value	Time of exposure	Species	Sex
Oral	LD50	OECD 401	200-2000 mg/kg		Rat	
	LC50		>21 mg/l	1 hour	Rat	
Dermal	LD50	OECD 402	>1000-2000 mg/kg		Rabbit	

Skin corrosion/irritation

Based on available data the classification criteria are not met.

Serious eye damage/irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

Based on available data the classification criteria are not met.

Germ cell mutagenicity

Based on available data the classification criteria are not met.

Carcinogenicity

Based on available data the classification criteria are not met.

Reproductive toxicity

Based on available data the classification criteria are not met.

Toxicity for specific target organ - single exposure

Based on available data the classification criteria are not met.

Toxicity for specific target organ - 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

not available

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

1-Hexanol

Creation date 12th January 2022
Revision date Version 2.0

SECTION 12: Ecological information

12.1. Toxicity

Acute toxicity

Based on available data the classification criteria are not met.

hexan-1-ol

Parameter	Value	Time of exposure	Species	Environment
EC50	201 mg/l	24 hour	Daphnia (Daphnia magna)	
LC50	97 mg/kg	96 hour	Fishes (Pimephales promelas)	
EC10	3000 mg/l	30 min	Bacteria (Pseudomonas putida)	

12.2. Persistence and degradability

Biodegradability

hexan-1-ol

Parameter	Method	Value	Time of exposure	Environment	Result
	OECD 301D	61.8 %	30 day		Easily biodegradable

not available

12.3. Bioaccumulative potential

Not available.

12.4. Mobility in soil

Not available.

12.5. Results of PBT and vPvB assessment

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms as it does not meet the criteria set out in section B of Regulation (EU) No 2017/2100.

12.7. Other adverse effects

Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.

Waste management legislation

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

1-Hexanol

Creation date	12th January 2022	Version	2.0
Revision date			

SECTION 14: Transport information

- 14.1. UN number or ID number**
UN 2282
- 14.2. UN proper shipping name**
HEXANOLS
- 14.3. Transport hazard class(es)**
3 Flammable liquids
- 14.4. Packing group**
III - substances presenting low danger
- 14.5. Environmental hazards**
not relevant
- 14.6. Special precautions for user**
Reference in the Sections 4 to 8.
- 14.7. Maritime transport in bulk according to IMO instruments**
not relevant

Additional information

Hazard identification No.	30
UN number	2282
Classification code	F1
Safety signs	3



Air transport - ICAO/IATA

Packaging instructions passenger	355
Cargo packaging instructions	366

Marine transport - IMDG

EmS (emergency plan)	F-E, S-D
----------------------	----------

SECTION 15: Regulatory information

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

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16th 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, as amended.

15.2. Chemical safety assessment

No chemical safety assessment has been performed for this substance.

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

1-Hexanol

Creation date	12th January 2022	Version	2.0
Revision date			

No chemical safety assessment has been performed for this substance.

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

1-Hexanol

Creation date	12th January 2022	Version	2.0
Revision date			

No chemical safety assessment has been performed for this substance.

SECTION 16: Other information

A list of standard risk phrases used in the safety data sheet

H226	Flammable liquid and vapour.
H319	Causes serious eye irritation.
H302+H312	Harmful if swallowed or in contact with skin.

Guidelines for safe handling used in the safety data sheet

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

Key to abbreviations and acronyms used in the safety data sheet

ADR	European agreement concerning the international carriage of dangerous goods by road
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
DNEL	Derived no-effect level
EC50	Concentration of a substance when it is affected 50% of the population
EINECS	European Inventory of Existing Commercial Chemical Substances
EmS	Emergency plan
ES	Identification code for each substance listed in EINECS
EU	European Union
EuPCS	European Product Categorisation System
IATA	International Air Transport Association
IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
INCI	International Nomenclature of Cosmetic Ingredients
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended

1-Hexanol

Creation date	12th January 2022	Version	2.0
Revision date			

LC50	Lethal concentration of a substance in which it can be expected death of 50% of the population
LD50	Lethal dose of a substance in which it can be expected death of 50% of the population
log Kow	Octanol-water partition coefficient
MARPOL	International Convention for the Prevention of Pollution from Ships
OEL	Occupational Exposure Limits
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted no-effect concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Agreement on the transport of dangerous goods by rail
UN	Four-figure identification number of the substance or article taken from the UN Model Regulations
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very Persistent and very Bioaccumulative
Acute Tox.	Acute toxicity
Eye Irrit.	Eye irritation
Flam. Liq.	Flammable liquid

Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

Recommended restrictions of use

not available

Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

The changes (which information has been added, deleted or modified)

The version 2.0 replaces the SDS version from 19 December 2019. Changes were made in sections 2, 13, 15 and 16.

More information

Classification procedure - calculation method.

Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.