

Trade name: Toluolum

Substance number: 156900

Version: 7 / CH

Date revised: 18.01.2024

Replaces Version: 6 / CH

Print date: 18.01.24

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

1.1. Product identifier

Toluolum

Item No. 15690000

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

Use of the substance/preparation

Solvent

1.3. Details of the supplier of the safety data sheet

Address/Manufacturer

Hänseler AG

Industriestrasse 35

9100 Herisau

Telephone no. 0041 (0)71 353 58 58

E-mail address of sdb@haenseler.ch

person responsible
for this SDS

1.4. Emergency telephone number

Switzerland :145 / Abroad +41 (0)44 251 51 51

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (Regulation (EC) No. 1272/2008)

Classification (Regulation (EC) No. 1272/2008)

Flam. Liq. 2	H225
Skin Irrit. 2	H315
Repr. 2	H361d
STOT SE 3	H336
STOT RE 2	H373
Asp. Tox. 1	H304
Aquatic Chronic 3	H412

The product is classified and labelled in accordance with Regulation (EC) No 1272/2008
For explanation of abbreviations see section 16.

2.2. Label elements

Labelling according to regulation (EC) No 1272/2008

Hazard pictograms



Signal word

Danger

Hazard statements

H225

Highly flammable liquid and vapour.

H315

Causes skin irritation.

Trade name: Toluolum

Substance number: 156900

Version: 7 / CH

Date revised: 18.01.2024

Replaces Version: 6 / CH

Print date: 18.01.24

H361d	Suspected of damaging the unborn child.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.
H304	May be fatal if swallowed and enters airways.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P308+P313	IF exposed or concerned: Get medicinal advice/attention.
P331	Do NOT induce vomiting.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

Hazardous component(s) to be indicated on label (Regulation (EC) No. 1272/2008)

contains toluene

2.3. Other hazards

In use, may form flammable/explosive vapour-air mixture.

The Substance does not meet PBT-criteria. This substance does not meet the vPvB-criteria. This substance does not have endocrine disrupting properties with respect to humans. This substance does not have endocrine disrupting properties with respect to non-target organisms.

SECTION 3: Composition/information on ingredients**Molecular weight**

Value 92.14 g/mol

Hazardous ingredients**toluene**

CAS No.	108-88-3		
EINECS no.	203-625-9		
Registration no.	01-2119471310-51-XXXX		
Concentration	>= 50		%
Classification (Regulation (EC) No. 1272/2008)			
	Flam. Liq. 2	H225	
	Asp. Tox. 1	H304	
	Skin Irrit. 2	H315	
	Repr. 2	H361d	
	STOT SE 3	H336	Nervous system
	STOT RE 2	H373	Nervous system
	Aquatic Chronic 3	H412	

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

Remove affected person from danger area. Remove contaminated clothing immediately and dispose of safely.

After inhalation

Ensure supply of fresh air. Summon a doctor immediately. If the patient is likely to become unconscious,

Trade name: Toluolum

Substance number: 156900

Version: 7 / CH

Date revised: 18.01.2024

Replaces Version: 6 / CH

Print date: 18.01.24

place and transport in stable sideways position.

After skin contact

Remove contaminated, soaked clothing immediately and dispose of safely. Wash off with soap and water. Consult a doctor if skin irritation persists.

After eye contact

Separate eyelids, wash the eyes thoroughly with water (15 min.). Seek medical advice immediately.

After ingestion

Rinse out mouth and give plenty of water to drink. Do not induce vomiting. Summon a doctor immediately. Administer activated charcoal.

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

Irritation of respiratory organs, Irritation of mucosa, Headache, Dizziness, Unconsciousness, Intoxication, Breathing stop

4.3. Indication of any immediate medical attention and special treatment needed**Hints for the physician / hazards**

In the case of swallowing with subsequent vomiting, aspiration of the lungs can occur which can lead to chemical pneumonia or asphyxiation.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Carbon dioxide, Dry powder, Foam

Non suitable extinguishing media

Water

5.2. Special hazards arising from the substance or mixture

In the event of fire the following can be released: Carbon monoxide (CO); Can build mixtures of gas and air which are capable of explosion.

5.3. Advice for firefighters**Special protective equipment for fire-fighting**

Use self-contained breathing apparatus.

Other information

Cool endangered containers with water spray jet. Suppress vapours with water spray jet.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Use personal protective clothing. Keep away unprotected persons.

6.2. Environmental precautions

Do not discharge into the drains/surface waters/groundwater. Prevent spread over a wide area (e.g. by containment or oil barriers). In case the product spills into sewage waters, immediately inform the authorities.

6.3. Methods and material for containment and cleaning up

Send in suitable containers for recovery or disposal. Pick up with absorbent material (eg sand, kieselgur, acid binder, universal binder, sawdust). Ensure adequate ventilation.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Trade name: Toluolum

Substance number: 156900

Version: 7 / CH

Date revised: 18.01.2024

Replaces Version: 6 / CH

Print date: 18.01.24

Advice on safe handling

Provide good ventilation of working area (local exhaust ventilation if necessary). Provide good room ventilation even at ground level (vapours are heavier than air). Handle and open container with care. Avoid formation of aerosols.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Vapours can form an explosive mixture with air. Take action to prevent static discharges. Use only explosion-proof equipment. Risk of explosion if the liquid enters the drains.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

explosion proof. Provide solvent-resistant and impermeable floor. Keep tightly closed in a dry and cool place. Suitable materials: Use steel containers. Use stainless steel containers. Use teflon-coated containers and pinings. Use viton-coated containers and pinings. Do not use containers and pinings made of traditionally synthetic materials.

Hints on storage assembly

Do not store with oxidizing agents.

Storage classes

Storage class according to TRGS 510	3	Flammable liquid
Storage category (Switzerland)	3	Flammable liquid

Further information on storage conditions

Keep container in a well-ventilated place. Keep container tightly closed. Protect from heat and direct sunlight.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limit values****toluene**

List	SUVA			
Type	MAK			
Value	190	mg/m ³	50	ppm(V)
Short term exposure limit	760	mg/m ³	200	ppm(V)
Skin resorption / sensibilisation: H; Pregnancy group: S; Remarks: H OL B R2F R2D SSc; Sehen, ZNS; DFG, HSE, INRS, NIOSH				

Derived No/Minimal Effect Levels (DNEL/DMEL)**toluene**

Type of value	Derived No Effect Level (DNEL)		
Reference group	Worker		
Duration of exposure	Long term		
Route of exposure	inhalative		
Mode of action	Systemic effects		
Concentration	192		mg/m ³

Type of value	Derived No Effect Level (DNEL)		
Reference group	Worker		
Duration of exposure	Long term		
Route of exposure	inhalative		
Mode of action	Local effects		
Concentration	192		mg/m ³

Type of value	Derived No Effect Level (DNEL)		
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Trade name: Toluolum

Substance number: 156900

Version: 7 / CH

Date revised: 18.01.2024

Replaces Version: 6 / CH

Print date: 18.01.24

Reference group	Worker	
Duration of exposure	Acute	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	384	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Acute	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	384	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	384	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	56.5	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	56.5	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Acute	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	226	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Acute	
Route of exposure	inhalative	
Mode of action	Local effects	
Concentration	226	mg/m ³
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	226	mg/kg/d
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	

Trade name: Toluolum

Substance number: 156900

Version: 7 / CH

Date revised: 18.01.2024

Replaces Version: 6 / CH

Print date: 18.01.24

Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	8.13	mg/kg/d

Predicted No Effect Concentration (PNEC)**toluene**

Type of value	PNEC	
Type	Freshwater	
Concentration	0.68	mg/l
Type of value	PNEC	
Type	Saltwater	
Concentration	0.68	mg/l
Type of value	PNEC	
Conditions	Intermittend	
Concentration	0.68	mg/l
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	13.61	mg/l
Type of value	PNEC	
Type	Sediment	
Concentration	16.39	mg/kg
Type of value	PNEC	
Type	Marine sediment	
Concentration	16.39	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	2.89	mg/kg

8.2. Exposure controls**Exposure controls**

See Section 7. No measures exceeding the ones mentioned necessary.

General protective and hygiene measures

Keep away from food-stuffs, beverages and feed-stocks. Take off immediately all contaminated clothing. Wash hands before breaks and after work. Avoid contact with skin and eyes. Use barrier skin cream. Do not eat, drink or smoke during work time. Do not inhale gases/vapours/aerosols. It is essential for pregnant women to avoid inhaling the product and not to let it come in contact with the skin.

Respiratory protection

Short term: filter apparatus; Gas filterA. EN 141; At intensive and longer exposition use self-contained breathing apparatus.

Hand protection

The glove material must be sufficient impermeable and resistant to the substance. Check the tightness before wear. Gloves should be well cleaned before being removed, then stored in a well ventilated location.

Reference substance	toluene
Appropriate Material	Fluoro carbon rubber - FKM
Material thickness	0.4 mm

Trade name: Toluolum

Substance number: 156900

Version: 7 / CH

Date revised: 18.01.2024

Replaces Version: 6 / CH

Print date: 18.01.24

Breakthrough time >= 8 h
 Appropriate Material viton
 Material thickness 0.7 mm
 Breakthrough time > 240 min
 Hand protection must comply with EN 374.

Eye protection

Tightly fitting safety glasses

Body protection

Solvent-resistant protective clothing

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties****Physical state** liquid**Colour** colourless**Odour** aromatic**Melting point**

Value -95 °C

Boiling point or initial boiling point and boiling range

Value 110 to 111 °C

Flammability

Flammable.

Upper and lower explosive limits

Lower explosion limit 1.2 %(V)

Upper explosion limit 7.1 %(V)

Flash point

Value 4 °C

Decomposition temperature

Remarks To avoid thermal decomposition, do not overheat.

pH value

Remarks Not applicable

Viscosity**dynamic**

Value 0.6 mPa.s

Temperature 20 °C

kinematicValue 0.63 mm²/s

Temperature 25 °C

Partition coefficient n-octanol/water (log value)

Reference substance toluene

log Pow 2.65

Temperature 20 °C

Vapour pressure

Value 30 to 35 hPa

Temperature 20 °C

Density and/or relative densityValue 0.871 g/cm³

Temperature 15 °C

Trade name: Toluolum

Substance number: 156900

Version: 7 / CH

Date revised: 18.01.2024

Replaces Version: 6 / CH

Print date: 18.01.24

Relative vapour density

Value 3.1

9.2. Other information**Odour threshold**

Value 1.77 µg/l

Evaporation rate

Value 5

Solubility in water

Value 0.5 g/l

Temperature 15 °C

Auto-ignition temperature

Value 480 to 536 °C

Explosive properties

evaluation no

Oxidising properties

evaluation None known

Other information

Forms explosive mixture with air are possible.

SECTION 10: Stability and reactivity**10.1. Reactivity**

No decomposition if stored and applied as directed.

10.2. Chemical stability

No decomposition if stored and applied as directed.

10.3. Possibility of hazardous reactions

Possible incompatibility with materials listed under section 10.5.

10.4. Conditions to avoid

Protect from heat and direct sunlight. Flames. Sparks

10.5. Incompatible materials

Formation of explosive gas/air mixtures. Reactions with strong acids. Reactions with oxidising agents. Reactions with halogenated compounds.

10.6. Hazardous decomposition products

Carbon monoxide and carbon dioxide, Aldehydes

SECTION 11: Toxicological information**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute oral toxicity (Components)****toluene**Species rat
LD50 5580 mg/kg

Duration of exposure -

Method OECD 401

Acute dermal toxicity (Components)**toluene**

Trade name: Toluolum

Substance number: 156900

Version: 7 / CH

Date revised: 18.01.2024

Replaces Version: 6 / CH

Print date: 18.01.24

Species	rabbit		
LD50	>	5000	mg/kg

Acute inhalative toxicity (Components)**toluene**

Species	Rats (male/female)		
LC50	28.1		mg/l
Duration of exposure	4	h	
Method	OECD 403		

toluene

Species	rat (male)		
LC50	25.7		mg/l
Administration/Form	Vapors		
Method	OECD 403		

toluene

Species	rat (female)		
LC50	30		mg/l
Administration/Form	Vapors		
Method	OECD 403		

Skin corrosion/irritation (Components)**toluene**

Species	rabbit		
evaluation	irritant		
Method	OECD 404		
Remarks	Danger of resorption through the skin.		

Serious eye damage/irritation (Components)**toluene**

Species	rabbit		
Method	OECD 405		
Remarks	None		

Sensitization (Components)**toluene**

Species	guinea pig		
evaluation	non-sensitizing		
Method	OECD 406		

Mutagenicity (Components)**toluene**

evaluation	No mutagenicity according to various in vitro tests.		
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Reproduction toxicity (Components)**toluene**

evaluation	Suspected of damaging the unborn child.		
Remarks	Indications of toxic effects are available from reproduction studies in animals.		

Carcinogenicity (Components)**toluene**

Species	mammal, species unspecified		
evaluation	No indications of carcinogenic effects are available from long-term trials.		

Specific Target Organ Toxicity (STOT) (Components)**toluene**

Single exposure			
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Trade name: Toluolum

Substance number: 156900

Version: 7 / CH

Date revised: 18.01.2024

Replaces Version: 6 / CH

Print date: 18.01.24

Route of exposure inhalative
Organs: Nervous system

toluene**Repeated exposure evaluation**

May cause damage to organs.
Route of exposure inhalative

Aspiration hazard (Components)**toluene**

Harmful: may cause lung damage if swallowed.

11.2 Information on other hazards**Endocrine disrupting properties with respect to humans**

This substance does not have endocrine disrupting properties with respect to humans.

Experience in practice

The solvent vapours cause an irritating effect to the respiratory organs. disorders of the central nervous system. Inhalation of vapours may lead to headache, drowsiness and dizziness.

SECTION 12: Ecological information *****12.1. Toxicity****Fish toxicity (Components)****toluene**

Species	Oncorhynchus kisutch	
LC50	5.5	mg/l
Duration of exposure	96	h

Daphnia toxicity (Components)**toluene**

Species	Ceriodaphnia spec	
LC50	3.78	mg/l
Duration of exposure	48	h

toluene

Species	Ceriodaphnia dubia	
NOEC	0.74	mg/l
Duration of exposure	7	d

Algae toxicity (Components)**toluene**

Species	Chlamydomonas angulosa	
EC50	134	mg/l
Duration of exposure	3	h
Source	LS-3542-00 SDS Brenntag 20160517	

Bacteria toxicity (Components)**toluene**

Species	Nitrosomonas sp	
EC50	84	mg/l
Duration of exposure	24	h

12.2. Persistence and degradability**Physico-chemical eliminability (Components)****toluene**

Remarks The product is readily biodegradable according to OECD criteria.

Trade name: Toluolum

Substance number: 156900

Version: 7 / CH

Date revised: 18.01.2024

Replaces Version: 6 / CH

Print date: 18.01.24

Biodegradability (Components)**toluene**

Value 86 %

Duration of test 20 d

Remarks The product is readily biodegradable according to OECD criteria.

Chemical oxygen demand (COD) (Components)**toluene**

Value 700 mg/g

12.3. Bioaccumulative potential**Partition coefficient n-octanol/water (log value)**

Reference substance toluene

log Pow 2.65

Temperature 20 °C

Octanol/water partition coefficient (log Pow) (Components)**toluene**

log Pow 2.73

Temperature 20 °C

12.4. Mobility in soil**Mobility in soil (Components)****toluene**

Mobile in soils

toluene

The product is insoluble and floats on water.

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

The Substance does not meet PBT-criteria.

This substance does not meet the vPvB-criteria.

12.6 Endocrine disrupting properties**Endocrine disrupting properties with respect to the environment**

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

12.7. Other adverse effects**General information / ecology**

Harmful to aquatic organisms. Do not allow it to reach ground water, water bodies or sewage system.

Hazard for drinking water supplies.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations for the product**

EWC waste code No not dispose with rubbish.

EWC waste code Should not be released into the sanitary sewer system.

Recovery or recycling, if possible. Otherwise: combustion in incineration plant.

Disposal recommendations for packaging

Unpurified packings can contain mixtures of gas and air which are capable of explosion.

Unpurified packings can contain mixtures of gas and air which are capable of explosion.

Disposal in compliance with local and national regulations.

Trade name: Toluolum

Substance number: 156900




Version: 7 / CH

Date revised: 18.01.2024

Replaces Version: 6 / CH

Print date: 18.01.24

SECTION 14: Transport information

	Land transport ADR/RID	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
Tunnel restriction code	D/E		
14.1. UN number	1294	1294	1294
14.2. UN proper shipping name	TOLUENE	TOLUENE	TOLUENE
14.3. Transport hazard class(es)	3	3	3
Label			
14.4. Packing group	II	II	II
Limited Quantity	1 I		
Transport category	2		

SECTION 15: Regulatory information

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

Water Hazard Class (Germany)

Water Hazard Class (Germany) WGK 2

Remarks Derivation of WGK according to Annex 1 No. 5.2 AwSV

15.2. Chemical safety assessment

For this substance a chemical safety assessment has been carried out.

SECTION 16: Other information

Hazard statements listed in Chapter 3

H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H361d Suspected of damaging the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.

CLP categories listed in Chapter 3

Aquatic Chronic 3 Hazardous to the aquatic environment, chronic, Category 3
Asp. Tox. 1 Aspiration hazard, Category 1
Flam. Liq. 2 Flammable liquid, Category 2
Repr. 2 Reproductive toxicity, Category 2
Skin Irrit. 2 Skin irritation, Category 2

Trade name: Toluolum

Substance number: 156900

Version: 7 / CH

Date revised: 18.01.2024

Replaces Version: 6 / CH

Print date: 18.01.24

STOT RE 2

Specific target organ toxicity - repeated exposure, Category 2

STOT SE 3

Specific target organ toxicity - single exposure, Category 3

Supplemental information

Relevant changes compared with the previous version of the safety data sheet are marked with: ***

This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.