

Trade name: Aether/Ethanolum 1:1

Substance number: 150620

Version: 5 / CH

Date revised: 28.05.2025

Replaces Version: 4 / CH

Print date: 28.05.25

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

Aether/Ethanolum 1:1

Item No. 15062000

Substance / product identification

UFI 4W5M-MDMX-TD1T-5G62

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

Pharmaceutical excipient

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. 1 H224

STOT SE 3 H336

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 ***

H224 Extremely flammable liquid and vapour.

H336 May cause drowsiness or dizziness.

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition

Trade name: Aether/Ethanolum 1:1

Substance number: 150620

Version: 5 / CH

Date revised: 28.05.2025

Replaces Version: 4 / CH

Print date: 28.05.25

P261 sources. No smoking.
 P280 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P304+P340 Wear protective gloves/protective clothing/eye protection/face protection.
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P501.3 Disposal in compliance with local and national regulations.

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

contains *** diethyl ether

Supplemental information

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

The product contains no PBT substances. The product contains no vPvB substances. This product does not contain a substance that has endocrine disrupting properties with respect to human. The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

SECTION 3: Composition/information on ingredients *****Hazardous ingredients *******diethyl ether**

CAS No. 60-29-7
 EINECS no. 200-467-2
 Registration no. 01-2119535785-29-XXXX
 Concentration >= 25 < 50 %
 Classification (Regulation (EC) No. 1272/2008)
 Flam. Liq. 1 H224
 Acute Tox. 4 H302
 STOT SE 3 H336

ATE oral 1'200 mg/kg

Further ingredients *****ethanol**

CAS No. 64-17-5
 EINECS no. 200-578-6
 Registration no. 01-2119457610-43-0098
 Concentration >= 50 %
 Advice: [4]
 Classification (Regulation (EC) No. 1272/2008)
 Flam. Liq. 2 H225

water

CAS No. 7732-18-5
 EINECS no. 231-791-2
 Concentration >= 1 < 10 %
 Advice: [4]

Bornan-2-one

CAS No. 76-22-2
 EINECS no. 200-945-0
 Registration no. 01-2119966156-31-XXXX
 Concentration < 1 %
 Advice: [4]

Trade name: Aether/Ethanolum 1:1

Substance number: 150620

Version: 5 / CH

Date revised: 28.05.2025

Replaces Version: 4 / CH

Print date: 28.05.25

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

Flam. Sol. 1	H228
Acute Tox. 4	H302
Acute Tox. 4	H332
Skin Irrit. 2	H315
Eye Dam. 1	H318
STOT SE 2	H371

Lungs; Route of exposure:
inhalative**Note**

[4] Voluntary information

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

Remove contaminated clothing immediately and dispose of safely.

After inhalation

Ensure supply of fresh air. Keep breathing passages free. Irregular breathing/no breathing: artificial respiration.

After skin contact

After contact with skin, wash immediately with plenty of water.

After eye contact

Separate eyelids, wash the eyes thoroughly with water (15 min.). Eye treatment by an ophthalmologist.

After ingestion

Do not induce vomiting - aspiration hazard. Summon a doctor immediately.

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

Foam, Dry powder

5.2. Special hazards arising from the substance or mixture

The product is combustible. Forms explosive mixture with air are possible. In case of combustion evolution of dangerous gases possible.

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

Use self-contained breathing apparatus. Wear protective clothing.

Other information

Do not discharge into surface waters/groundwater. Cool endangered containers with water spray jet.

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

Avoid contact with skin, eyes and clothing. Ensure supply of fresh air.

6.2. Environmental precautions

Explosive. Do not empty into drains.

6.3. Methods and material for containment and cleaning up

Pick up with absorbent material. Dispose of absorbed material in accordance with the regulations. Clean

Trade name: Aether/Ethanolum 1:1

Substance number: 150620

Version: 5 / CH

Date revised: 28.05.2025

Replaces Version: 4 / CH

Print date: 28.05.25

up affected area.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid formation of aerosols. Work only in fume cupboards. Ensure adequate ventilation. Avoid inhaling dusts/ billows/ steams. Avoid contact with skin, eyes and clothing. Observe the usual precautions for handling chemicals.

Advice on protection against fire and explosion

Keep away from sources of ignition. Take action to prevent static discharges.

7.2. Conditions for safe storage, including any incompatibilities

Recommended storage temperature

Value	15	25	°C
-------	----	----	----

Storage classes

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

Further information on storage conditions

Keep container tightly closed and in a well-ventilated place. Protect from light. Protect from exposure to air/oxygen. Keep away from sources of ignition. Do not keep at temperatures above 25 °C.

SECTION 8: Exposure controls/personal protection ***

8.1. Control parameters

Exposure limit values ***

ethanol

List	SUVA			
Type	MAK			
Value	960	mg/m ³	500	ppm(V)
Short term exposure limit	1920	mg/m ³	1000	ppm(V)
Pregnancy group: S; Remarks: SSs; Formal; INRS NIOSH				

diethyl ether

List	SUVA			
Type	MAK			
Value	1200	mg/m ³	400	ppm(V)
Short term exposure limit	1200	mg/m ³	400	ppm(V)
Remarks: ZNS, Geruch, OAWKT HU; NIOSH				

Derived No/Minimal Effect Levels (DNEL/DMEL)

ethanol

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	343		mg/kg/d

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		

Trade name: Aether/Ethanolum 1:1

Substance number: 150620

Version: 5 / CH

Date revised: 28.05.2025

Replaces Version: 4 / CH

Print date: 28.05.25

Concentration	950	mg/m ³
---------------	-----	-------------------

diethyl ether

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	308	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	Systemic effects	
Concentration	616	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	44	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	54.5	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	15.6	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	15.6	mg/kg/d

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

Type of value	PNEC	
Type	Freshwater	
Conditions	Long term	
Concentration	0.96	mg/l

Type of value	PNEC	
Type	Saltwater	
Concentration	0.79	mg/l

Trade name: Aether/Ethanolum 1:1

Substance number: 150620

Version: 5 / CH

Date revised: 28.05.2025

Replaces Version: 4 / CH

Print date: 28.05.25

Type of value	PNEC	
Type	Freshwater sediment	
Concentration	3.6	mg/kg
Type of value	PNEC	
Type	Marine sediment	
Concentration	2.9	mg/kg
Type of value	PNEC	
Type	Freshwater	
Conditions	Intermittend	
Concentration	2.75	mg/l
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	580	mg/l
diethyl ether		
Type of value	PNEC	
Type	Freshwater	
Concentration	2	mg/l
Type of value	PNEC	
Type	Saltwater	
Concentration	0.2	mg/l
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	4.2	mg/l
Type of value	PNEC	
Type	Sediment	
Concentration	9.14	mg/kg
Type of value	PNEC	
Type	Marine sediment	
Concentration	0.914	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	0.66	mg/kg

8.2. Exposure controls

General protective and hygiene measures

Wash hands and face after work. Preventative skin protection. Remove contaminated, soaked clothing immediately and dispose of safely.

Respiratory protection

Breathing apparatus in the event of aerosol or mist formation. Short term: filter apparatus, filter AX

Hand protection

Appropriate Material	viton		
Material thickness	0.70	mm	
Breakthrough time	> 30	min	

Eye protection

necessary

Trade name: Aether/Ethanolum 1:1

Substance number: 150620

Version: 5 / CH

Date revised: 28.05.2025

Replaces Version: 4 / CH

Print date: 28.05.25

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Boiling point or initial boiling point and boiling range

Value	34.6	to	78	°C
Pressure	101.3	kPa		
Source	Merck Index			

Flash point

Value	-40	to	13	°C
Source	Merck Index			

Vapour pressure

Value	5.9	to	58.7	kPa
Temperature	20	°C		
Source	Merck Index			

Density and/or relative density

Value	0.71	to	0.81	g/cm ³
Temperature	20	°C		
Source	Merck Index			

9.2. Other information

Efflux time

Value	10	s
Method	DIN 53211 4 mm	
Source	Estimated value	

SECTION 10: Stability and reactivity

10.4. Conditions to avoid

Protect from light. Protect from exposure to air/oxygen (peroxide formation). Protect from heat/overheating.

10.5. Incompatible materials

Strong oxidising agents, Halogens, Ozone (danger of explosion!), Peroxides, Formation of explosive gas/air mixtures. Reactions with oxygen.

10.6. Hazardous decomposition products

Other information

Vapours and gases can form an explosive mixture with air.

SECTION 11: Toxicological information

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

Acute oral toxicity

ATE	2'571.41	mg/kg
	02	
Method	calculated value (Regulation (EC) No. 1272/2008)	

Acute oral toxicity (Components)

ethanol

Species	rat	
LD50	7060	mg/kg
Source	Toxicology and Applied Pharmacology. Vol. 16, Pg. 718, 1970.	

Trade name: Aether/Ethanolum 1:1

Substance number: 150620

Version: 5 / CH

Date revised: 28.05.2025

Replaces Version: 4 / CH

Print date: 28.05.25

ethanol

Species	rat		
LD50		10470	mg/kg

Bornan-2-one

Species	mouse		
LD50		1310	mg/kg

diethyl ether

Species	rat		
LD50		1200	mg/kg

Acute dermal toxicity (Components)**ethanol**

Species	rabbit		
LD50		15800	mg/kg

ethanol

NOAEL		8232	mg/kg
-------	--	------	-------

Bornan-2-one

Species	rabbit		
LD50	>	5000	mg/kg

diethyl ether

Species	rabbit		
LD50	>	20000	mg/kg
Method	OECD 402		

Acute inhalative toxicity (Components)**ethanol**

Species	rat		
LC50		30000	mg/m ³
Duration of exposure	4	h	
Administration/Form	Vapors		

Bornan-2-one

LC50		1.5	mg/l
------	--	-----	------

diethyl ether

Species	rat		
LC50		32000	ppm(V)
Duration of exposure	4	h	
Administration/Form	Vapors		

Skin corrosion/irritation

Reference substance	diethyl ether
Species	rabbit
evaluation	non-irritant

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

evaluation	non-irritant
------------	--------------

diethyl ether

Species	rabbit		
Duration of exposure	4	h	
evaluation	non-irritant		
Method	OECD 404		

Serious eye damage/irritation

Reference substance	diethyl ether
Species	rabbit
evaluation	slightly irritant

Trade name: Aether/Ethanolum 1:1

Substance number: 150620

Version: 5 / CH

Date revised: 28.05.2025

Replaces Version: 4 / CH

Print date: 28.05.25

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

evaluation irritant

diethyl etherSpecies rabbit
evaluation non-irritant
Method OECD 405**Sensitization**Reference substance diethyl ether
Species Human
evaluation non-sensitizing**Sensitization (Components)****ethanol**

evaluation non-sensitizing

diethyl etherSpecies mouse
evaluation non-sensitizing
Method OECD 429**Mutagenicity (Components)****ethanol**

evaluation No mutagenicity in the Ames-test.

diethyl etherSpecies Salmonella typhimurium
evaluation No mutagenicity in the Ames-test.
Method Ames test**Carcinogenicity (Components)****diethyl ether**

evaluation No negative effects

Specific Target Organ Toxicity (STOT) (Components)**diethyl ether****Single exposure**

evaluation May cause drowsiness or dizziness.

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

The product does not contain a substance that has endocrine disrupting properties with respect to humans.

Experience in practice

Has a degreasing effect on the skin. Irritates the mucous membrane.

SECTION 12: Ecological information**12.1. Toxicity****Fish toxicity**Species Fathead minnow (Pimephales promelas)
LC50 2600 mg/l
Duration of exposure 96 h**Fish toxicity (Components)****ethanol**

Trade name: Aether/Ethanolum 1:1

Substance number: 150620

Version: 5 / CH

Date revised: 28.05.2025

Replaces Version: 4 / CH

Print date: 28.05.25

Species	golden orfe (<i>Leuciscus idus</i>)	
LC50	8140	mg/l
Duration of exposure	96 h	

Bornan-2-one

LC50	35	mg/l
Duration of exposure	96 h	

diethyl ether

Species	golden orfe (<i>Leuciscus idus</i>)	
LC50	> 100	mg/l
Duration of exposure	48 h	

diethyl ether

Species	Fathead minnow (<i>Pimephales promelas</i>)	
LC50	2560	mg/l
Duration of exposure	96 h	
Method	OECD 203	

Daphnia toxicity

Species	Daphnia magna	
EC50	165	mg/l
Duration of exposure	24 h	

Daphnia toxicity (Components)**ethanol**

Species	Daphnia magna	
EC50	9000 to 14000	mg/l
Duration of exposure	48 h	

diethyl ether

Species	Daphnia magna	
EC50	> 100	mg/l
Duration of exposure	48 h	

diethyl ether

Species	Daphnia magna	
EC50	165	mg/l
Duration of exposure	24 h	

diethyl ether

Species	Daphnia magna	
IC50	1380	mg/l
Duration of exposure	48 h	

Algae toxicity (Components)**diethyl ether**

Species	Desmodesmus subspicatus	
EC50	> 100	mg/l
Duration of exposure	72 h	
Method	OECD 201	

diethyl ether

Species	Desmodesmus subspicatus	
NOEC	100	mg/l
Duration of exposure	72 h	
Method	OECD 201	

Bacteria toxicity (Components)**diethyl ether**

Species	Photobacterium phosphoreum	
EC50	5600	mg/l
Duration of exposure	15 min	

Trade name: Aether/Ethanolum 1:1

Substance number: 150620

Version: 5 / CH

Date revised: 28.05.2025

Replaces Version: 4 / CH

Print date: 28.05.25

12.2. Persistence and degradability

Biodegradability

evaluation sparingly degradable

Biodegradability (Components)

ethanol

Value 94 %

evaluation Readily biodegradable

diethyl ether

evaluation not readily degradable

Chemical oxygen demand (COD) (Components)

ethanol

Value 0.93 to 1.67 mg/g

12.3. Bioaccumulative potential

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

ethanol

log Pow -0.31

diethyl ether

log Pow 1.05

Bioconcentration factor (BCF) (Components)

ethanol

BCF 0.66

12.4. Mobility in soil

Mobility in soil (Components)

diethyl ether

Moderately mobile in soils

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment

The product contains no PBT substances

The product contains no vPvB substances.

12.6 Endocrine disrupting properties

Endocrine disrupting properties with respect to the environment

The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

12.7. Other adverse effects

General information / ecology

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

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations for the product

Disposal in compliance with local and national regulations.

Disposal recommendations for packaging

Dispose of as unused product.

Trade name: Aether/Ethanolum 1:1

Substance number: 150620




Version: 5 / CH

Date revised: 28.05.2025

Replaces Version: 4 / CH

Print date: 28.05.25

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	1993	1993	1993
14.2. UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (ethanol, diethyl ether)	FLAMMABLE LIQUID, N.O.S. (ethanol, diethyl ether)	FLAMMABLE LIQUID, N.O.S. (ethanol, diethyl ether)
14.3. Transport hazard class(es)	3	3	3
Label			
14.4. Packing group	I	I	I
Limited Quantity	0		
Transport category	1		

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 1

Remarks

Derivation of WGK according to Annex 1 No. 5.2 AwSV

SECTION 16: Other information**Hazard statements listed in Chapter 3**

H224 Extremely flammable liquid and vapour.
H302 Harmful if swallowed.
H336 May cause drowsiness or dizziness.

CLP categories listed in Chapter 3

Acute Tox. 4 Acute toxicity, Category 4
Flam. Liq. 1 Flammable liquid, Category 1
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.