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

1.1. Product identifier

Ethylis acetas

Item No. 15050000

Registration no.

Registration no. 01-2119475103-46-XXXX

Substance / product identification

CAS-No. 141-78-6

EINECS-No. 205-500-4

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

Use of the substance/preparation

Manufacture of pharmaceutical products, Reagent for analyses

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 person responsible for this SDS sdb@haenseler.ch

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
Eye Irrit. 2	H319
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 ***

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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 *** ethyl acetate

Supplemental information

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

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 ***

3.1. Substances

Molecular weight

Value 88.11 g/mol

Hazardous ingredients *

ethyl acetate

CAS No.	141-78-6	
EINECS no.	205-500-4	
Registration no.	01-2119475103-46-XXXX	
Concentration	>= 50	%

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

Flam. Liq. 2	H225
Eye Irrit. 2	H319
STOT SE 3	H336

SECTION 4: First aid measures

4.1. Description of first aid measures

After inhalation

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

After skin contact

Remove contaminated, soaked clothing immediately and dispose of safely. After contact with skin, wash immediately with plenty of water.

After eye contact

Separate eyelids, wash the eyes thoroughly with water (15 min.). Summon a doctor immediately.

After ingestion

Do not induce vomiting - aspiration hazard. Summon a doctor immediately. Drink water in small gulps. Administer activated charcoal. Give a solution of sodium sulphate.

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

Dizziness, Narcosis, Nausea, Vomiting, Headache, Dizziness, Breathing stop

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

Hints for the physician / treatment

If swallowed, flush stomach

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide, Foam, Dry powder

Non suitable extinguishing media

not applicable

5.2. Special hazards arising from the substance or mixture

The product is combustible. Vapours heavier than air. Forms esplosive mixture with air are possible. In case of combustion evolution of dangerous gases possible. Take precautionary measures against static charges.

5.3. Advice for firefighters

Special protective equipment for fire-fighting

Use self-contained breathing apparatus. Use personal protective clothing.

Other information

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Do not inhale vapours. Avoid contact with skin, eyes and clothing. Ensure supply of fresh air. Keep away sources of ignition. Keep away unprotected persons. Refer to protective measures listed in Sections 7 and 8.

6.2. Environmental precautions

Explosive. Do not empty into drains.

6.3. Methods and material for containment and cleaning up

Take up with absorbent material (eg sand, kieselguhr, universal binder). When picked up, treat material as prescribed under Section 13 "Disposal". Clean up affected area.

6.4. Reference to other sections

Refer to protective measures listed in Sections 7 and 8. Information regarding waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Work only in fume cupboards. Do not inhale substance. Avoid development of dusts/ billows/ steams.

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

Requirements for storage rooms and vessels

Store away from sources of ignition and heat.

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. Keep away from sources of ignition. Protect from warmth. Protect from light.

SECTION 8: Exposure controls/personal protection ***

8.1. Control parameters

Exposure limit values ***

ethyl acetate

List	SUVA			
Type	MAK			
Value	730	mg/m³	200	ppm(V)
Short term exposure limit	1460	mg/m³	400	ppm(V)

Pregnancy group: S; Remarks: SSc; OAW Auge; INRS NIOSH

Derived No/Minimal Effect Levels (DNEL/DMEL)

ethyl acetate

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	1468	mg/m³

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	1468	mg/m³

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	63	mg/kg

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	734	mg/m³
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	734	mg/m³
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	734	mg/m³
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	734	mg/m³
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	37	mg/kg
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	367	mg/m³
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	oral	
Mode of action	Systemic effects	
Concentration	4.5	mg/kg
Type of value	Derived No Effect Level (DNEL)	
Reference group	Consumer	
Duration of exposure	Long term	
Route of exposure	inhalative	
Concentration	367	mg/kg

Predicted No Effect Concentration (PNEC)

ethyl acetate

Type of value	PNEC	
Type	Freshwater	
Concentration	0.26	mg/l
Type of value	PNEC	

Type	Saltwater	
Concentration	0.026	mg/l
Type of value	PNEC	
Type	Sediment	
Concentration	1.25	mg/kg
Type of value	PNEC	
Type	Marine sediment	
Concentration	0.125	mg/kg
Type of value	PNEC	
Type	Soil	
Concentration	0.24	mg/kg

8.2. Exposure controls

General protective and hygiene measures

Remove contaminated, soaked clothing immediately and dispose of safely. Preventative skin protection. Wash hands and face after work. Work only in fume cupboards. Do not inhale vapours.

Respiratory protection

Breathing apparatus in the event of aerosol or mist formation. Full mask, filter A

Hand protection

Butyl rubber gloves

Use	Short-term hand contact		
Appropriate Material	Butyl rubber		
Material thickness		0.7	mm
Breakthrough time	>	120	min

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.

Eye protection

Safety glasses; Eye protection must comply with EN 166.

Body protection

Fire-resistant antistatic protective clothing

Environmental exposure controls

Do not allow to enter drains or water courses.

SECTION 9: Physical and chemical properties ***

9.1. Information on basic physical and chemical properties

Physical state	liquid
Colour	colourless
Odour	fruity

Melting point

Value	-83	°C

Boiling point or initial boiling point and boiling range

Value	77.1	°C
Pressure	1013 hPa	

Flammability

Not applicable

Upper and lower explosive limits

Lower explosion limit	2.1	%(V)
Upper explosion limit	11.5	%(V)

Flash point

Value	-4	°C
Method	closed cup	

Ignition temperature

Value	460	°C
Method	DIN 51794	

Decomposition temperature

Remarks: At normal pressure may be distilled without decomposition.

pH value

Remarks: No data available

Viscosity

dynamic

Value	0.44	mPa.s
Temperature	20 °C	

Vapour pressure

Value	98.4	
Temperature	20 °C	
Source	GESTIS-Stoffdatenbank	
Value	160	hPa
Temperature	30 °C	
Source	GESTIS-Stoffdatenbank	

Density and/or relative density

Value	0.90	g/cm³
Temperature	20 °C	

Relative vapour density

Value: 3.04

9.2. Other information

Odour threshold

Value: 0.1 to 181.5 mg/m³

Evaporation rate

Remarks: No data available

Solubility in water

Value	85.3	g/l
Temperature	20 °C	

Minimum ignition energy

Minimum ignition energy: 1.42 MJ

Auto-ignition temperature

Value: 460 °C

Explosive properties

evaluation: no

Oxidising properties

Remarks: Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity
Formation of explosive gas/air mixtures.

10.2. Chemical stability
Protect from light and atmospheric moisture.

10.4. Conditions to avoid
Protect from light. Protect from heat/overheating. Protect from exposure to air/oxygen.

10.5. Incompatible materials
Risk of ignition or formation of inflammable gases or vapours with: Fluorine, chlorosulphuric acid, Strong oxidising agents, Risk of explosion with: lithium tetrahydrioaluminate, Alkaline metals, Reactions with strong acids. Bases

10.6. Hazardous decomposition products
No data available.

Other information
sensitive to air. 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 (Components)

ethyl acetate

Species	rat		
LD50		5620	mg/kg
Source	RTECS		

Acute dermal toxicity (Components)

ethyl acetate

Species	rabbit		
	>	18000	mg/kg

Skin corrosion/irritation (Components)

ethyl acetate

Species	rabbit
Remarks	No effect of irritation known.

Serious eye damage/irritation (Components)

ethyl acetate

evaluation	strongly irritant

Sensitization (Components)

ethyl acetate

Species	guinea pig
evaluation	non-sensitizing
Method	OECD 406

Subacute, subchronic, chronic toxicity

Remarks	No data available.

Mutagenicity (Components)

ethyl acetate

Species	Salmonella typhimurium
evaluation	No mutagenicity in the Ames-test.
Method	OECD 471
Remarks	negative

ethyl acetate

Species	mammal, species unspecified
Remarks	negative

Reproduction toxicity (Components)

ethyl acetate

Remarks	No data available.

Carcinogenicity (Components)

ethyl acetate

Remarks	No data available.

Specific Target Organ Toxicity (STOT) (Components)

ethyl acetate

Single exposure

evaluation	Causes damage to organs. Route of exposure inhalative Organs: Nervous system

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

After Swallowing: Irritates the mucous membrane. May lead to nausea, headache, drowsiness and dizziness. Inhalation of the vapours causes irritation of the respiratory tract and mucous membrane, headaches, nausea, giddiners, vomiting. When inhaled in larger quantities, the solvent vapours cause a narcotic effect. Inhalation of solvent vapours in higher concentration may lead to nausea, headache, drowsiness and dizziness. Has a degreasing effect on the skin.

Other information

Observe the usual precautions for handling chemicals.

SECTION 12: Ecological information ***

12.1. Toxicity

Fish toxicity (Components)

ethyl acetate

Species	Fathead minnow (Pimephales promelas)		
	230		mg/l
Duration of exposure	96	h	

Daphnia toxicity (Components)

ethyl acetate

Species	Daphnia magna		
EC50	717		mg/l
Duration of exposure	48	h	

ethyl acetate

Species	Daphnia magna		
NOEC	2.4		mg/l
Duration of exposure	21	d	
Method	OECD 211		

Algae toxicity (Components)

ethyl acetate

Species	Desmodesmus subspicatus

	3300		mg/l
Duration of exposure	48	h	

ethyl acetate

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

Bacteria toxicity (Components)

ethyl acetate

Species	Pseudomonas putida		
	2900		mg/l
Duration of exposure	16	h	

12.2. Persistence and degradability

General information

Not applicable

Physico-chemical eliminability (Components)

ethyl acetate

Remarks	No data available.

Biodegradability (Components)

ethyl acetate

Value	100		%
Duration of test	28	d	
evaluation	Readily biodegradable		
Method	OECD 301D		

ethyl acetate

Value	appr. 69		%
Duration of test	20	d	
evaluation	Readily biodegradable		
Source	ECHA		
Source	aerob		

Ready degradability (Components)

ethyl acetate

Chemical oxygen demand (COD) (Components)

ethyl acetate

Value	1820	mg/g
Source	Theoretischer Sauerstoffbedarf (ThSB)	

12.3. Bioaccumulative potential

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

ethyl acetate

log Pow	0.73
Method	experimental

Bioconcentration factor (BCF) (Components)

ethyl acetate

BCF	30		
Duration of exposure	3	d	
Temperature	22.5	°C	
Species	golden orfe (Leuciscus idus)		
Source	melanotus		

12.4. Mobility in soil

General information

For this subsection there is no ecotoxicological data available on the product as such.

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 envrionment

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

12.7. Other adverse effects

General information / ecology

Toxic for aquatic organismes. 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.

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	1173	1173	1173
14.2. UN proper shipping name	ETHYL ACETATE	ETHYL ACETATE	ETHYL ACETATE
14.3. Transport hazard class(es)	3	3	3
Label			
14.4. Packing group	II	II	II
Limited Quantity	1 l		
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 1
Remarks	Derivation of WGK according to Annex 1 No. 5.2 AwSV

National regulations Switzerland

SFOPH T no.	1157

15.2. Chemical safety assessment

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

SECTION 16: Other information

Hazard statements listed in Chapter 3

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

CLP categories listed in Chapter 3

Eye Irrit. 2	Eye irritation, Category 2
Flam. Liq. 2	Flammable liquid, 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.