SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Version 1
Print Date 11/09/2025

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

1.1 Product identifiers

Product name : Ethyl acetate

Product Number : Ethyl129
Brand : 6Science LTD
Index-No. : 607-022-00-5
REACH No. : 01-2119475103-46-XXXX
CAS-No. : 141-78-6

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

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company : 6Science LTD
Unit 2 Welby Grange Business Park
Welby Lane
Melton Mowbary
Leicestershire
LE14 3EF
UNITED KINGDOM

Telephone : +44 (0)115 779 0196
E-mail address : info@6science.co.uk

1.4 Emergency telephone

Emergency Phone # : +44 (0)870 8200418 (CHEMTREC)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567

Flammable liquids, (Category 2)	H225: Highly flammable liquid and vapor.
Eye irritation, (Category 2)	H319: Causes serious eye irritation.
Specific target organ toxicity -	H336: May cause drowsiness or dizziness.

single exposure, (Category 3),
Central nervous system

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567

Pictogram

Signal Word	Danger
Hazard Statements	
H225	Highly flammable liquid and vapor.
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.
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.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard information (EU)	
EUH066	Repeated exposure may cause skin dryness or cracking.

Reduced Labeling (<= 125 ml)

Pictogram

Signal Word	Danger
Hazard Statements	none
Precautionary Statements	none
Supplemental Hazard information (EU)	
EUH066	Repeated exposure may cause skin dryness or cracking.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:
The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Formula	:	$C_4H_8O_2$
Molecular weight	:	88.11 g/mol
CAS-No.	:	141-78-6
EC-No.	:	205-500-4
Index-No.	:	607-022-00-5

Component		Classification	Concentration
ethyl acetate			
CAS-No. EC-No. Index-No.	141-78-6 205-500-4 607-022-00-5	Flam. Liq. 2; Eye Irrit. 2; STOT SE 3; H225, H319, H336 Concentration limits: 20 %: STOT SE 3, H336;	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice
Show this material safety data sheet to the doctor in attendance.

If inhaled
After inhalation: fresh air. Call in physician.

In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact
After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed
After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Carbon dioxide (CO2) Foam Dry powder

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides
Combustible.
Pay attention to flashback.
Vapors are heavier than air and may spread along floors.
Development of hazardous combustion gases or vapours possible in the event of fire.
Forms explosive mixtures with air at ambient temperatures.

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

5.4 Further information

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition.
Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains. Risk of explosion.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®).
Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling
Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Advice on protection against fire and explosion
Keep away from open flames, hot surfaces and sources of ignition.Take precautionary measures against static discharge.

Hygiene measures

Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions
Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Storage class
Storage class (TRGS 510): 3: Flammable liquids

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

Component	CAS-No.	Control parameters	Value	Basis
ethyl acetate	141-78-6	TWA	200 ppm 734 mg/m3	Europe. Commission Directive 2017/164/EU establishing a fourth list of indicative occupational exposure limit values
	Remarks	Indicative		
		STEL	400 ppm 1,468 mg/m3	Europe. Commission Directive 2017/164/EU establishing a fourth list of indicative occupational exposure limit values
		Indicative		
		STEL	400 ppm 1,468 mg/m3	UK. EH40 WEL - Workplace Exposure Limits
		TWA	200 ppm 734 mg/m3	UK. EH40 WEL - Workplace Exposure Limits

Derived No Effect Level (DNEL)

Application Area	Routes of exposure	Health effect	Value
Workers	Inhalation	Acute systemic effects	1468 mg/m3
Workers	Inhalation	Acute local effects	1468 mg/m3
Workers	Skin contact	Long-term systemic effects	63mg/kg BW/d
Workers	Inhalation	Long-term systemic effects	734 mg/m3
Workers	Inhalation	Long-term local effects	734 mg/m3
Consumers	Inhalation	Acute local effects, Acute systemic	734 mg/m3

		effects	
Consumers	Skin contact	Long-term systemic effects	37mg/kg BW/d
Consumers	Inhalation	Long-term systemic effects	367 mg/m3
Consumers	Ingestion	Long-term systemic effects	4.5mg/kg BW/d
Consumers	Inhalation	Long-term local effects	367 mg/m3

Predicted No Effect Concentration (PNEC)

Compartment	Value
Soil	0.24 mg/kg
Sea water	0.026 mg/l
Fresh water	0.26 mg/l
Sea sediment	0.125 mg/kg
Fresh water sediment	1.25 mg/kg

8.2 Exposure controls

Personal protective equipment

Eye/face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection
This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).
Splash contact
Material: butyl-rubber
Minimum layer thickness: 0.7 mm
Break through time: 120 min
Material tested:Butoject® (KCL 898)

Body Protection
Flame retardant antistatic protective clothing.

Respiratory protection
Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds

The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Control of environmental exposure
Do not let product enter drains. Risk of explosion.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Physical state clear, liquid

b)	Color	colorless
c)	Odor	fruity
d)	Melting point/freezing point	Melting point/range: -84 °C
e)	Initial boiling point and boiling range	76.5 - 77.5 °C
f)	Flammability (solid, gas)	No data available
g)	Upper/lower flammability or explosive limits	Upper explosion limit: 11.5 %(V) Lower explosion limit: 2.1 %(V)
h)	Flash point	-4 °C - closed cup
i)	Autoignition temperature	No data available
j)	Decomposition temperature	Distillable in an undecomposed state at normal pressure.
k)	pH	No data available
l)	Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
m)	Water solubility	No data available
n)	Partition coefficient: n-octanol/water	log Pow: 0.73 - Bioaccumulation is not expected., (Lit.)
o)	Vapor pressure	No data available
p)	Density	0.90 g/cm3 at 20 °C
	Relative density	No data available
q)	Relative vapor density	No data available
r)	Particle characteristics	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	none

9.2 Other safety information

Relative vapor density	3.04

SECTION 10: Stability and reactivity

10.1 Reactivity

Vapors may form explosive mixture with air.

10.2 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions
Risk of ignition or formation of inflammable gases or vapours with:
Exothermic reaction with:
Fluorine
chlorosulfonic acid
Strong oxidizing agents
fuming sulfuric acid
Risk of explosion with:
lithium aluminium hydride
Alkali metals
hydrides
Alkaline earth metals
Violent reactions possible with:
Strong acids and strong bases

10.4 Conditions to avoid
Warming.

10.5 Incompatible materials
No data available

10.6 Hazardous decomposition products
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - 5,620 mg/kg
Remarks: (RTECS)
Inhalation: No data available
LD50 Dermal - Rabbit - male - > 20,000 mg/kg
Remarks: (ECHA)

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation
Remarks: (IUCLID)

Serious eye damage/eye irritation
Remarks: Causes serious eye irritation.
Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization
Maximization Test - Guinea pig
Result: negative
(OECD Test Guideline 406)

Germ cell mutagenicity
Test Type: UDS (Unscheduled DNA synthesis assay)
Test system: Escherichia coli

Metabolic activation: with and without metabolic activation
Method: US-EPA
Result: negative
Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Test Type: Micronucleus test
Species: Chinese hamster
Cell type: Red blood cells (erythrocytes)
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative

Carcinogenicity
This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
May cause drowsiness or dizziness. - Central nervous system
Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

11.2 Additional Information

Endocrine disrupting properties

Product:

Assessment	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Repeated dose toxicity - Rat - male and female - Oral - 92 Days - NOAEL (No observed adverse effect level) - 900 mg/kg - LOAEL (Lowest observed adverse effect level) - 3,600 mg/kg

RTECS: AH5425000
Inhalation of high concentrations may cause:, Headache, Drowsiness, Dizziness, Vomiting, narcosis, anemia, Central nervous system depression

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Kidney - Irregularities - Based on Human Evidence

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish	flow-through test LC50 - Pimephales promelas (fathead minnow) - 230 mg/l - 96 h (US-EPA)
Toxicity to algae	static test NOEC - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	Remarks: (IUCLID) (ethyl acetate)
Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity)	semi-static test NOEC - Daphnia magna (Water flea) - 2.4 mg/l - 21 d (OECD Test Guideline 211)

12.2 Persistence and degradability

Biodegradability	aerobic - Exposure time 20 d Result: ca.69 % - Readily biodegradable. Remarks: (ECHA)
Theoretical oxygen demand	1,820 mg/g Remarks: (Lit.)

12.3 Bioaccumulative potential

Bioaccumulation	Leuciscus idus melanotus - 3 Days at 22.5 °C(ethyl acetate) Bioconcentration factor (BCF): 30

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions. Notice Directive on waste 2008/98/EC.

SECTION 14: Transport information

14.1 UN number

ADR/RID: 1173 IMDG: 1173 IATA: 1173

14.2 UN proper shipping name

ADR/RID: ETHYL ACETATE
IMDG: ETHYL ACETATE
IATA: Ethyl acetate

14.3 Transport hazard class(es)

ADR/RID: 3 IMDG: 3 IATA: 3

14.4 Packaging group

ADR/RID: II IMDG: II IATA: II

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user

Tunnel restriction code : (D/E)

Further information : No data available

SECTION 15: Regulatory information

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Authorisations and/or restrictions on use

National legislation

Seveso III: Directive 2012/18/EU of the P5c FLAMMABLE LIQUIDS

European Parliament and of the Council
on the control of major-accident hazards
involving dangerous substances.

Other regulations
Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical Safety Assessment
A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Full text of H-Statements

H225	Highly flammable liquid and vapor.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
EUH066	Repeated exposure may cause skin dryness or cracking.

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further information

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. It does not represent any guarantee of the properties of the product. 6Science LTD shall not be held liable for any damage resulting from handling or from contact with the above product.

Annex: Exposure scenario

Identified uses:

Use: Manufacturing and on-site use

SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
SU 3, SU9: Industrial uses: Uses of substances as such or in preparations at industrial sites, Manufacture of fine chemicals
PC19: Intermediate
PROC1: Use in closed process, no likelihood of exposure **PROC2:** Use in closed, continuous process with occasional controlled exposure **PROC3:** Use in closed batch process (synthesis or formulation) **PROC4:** Use in batch and other process (synthesis) where opportunity for exposure arises **PROC8b:** Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities **PROC9:** Transfer of substance or preparation into small containers (dedicated filling line, including weighing) **PROC15:** Use as laboratory reagent
ERC1: Manufacture of substances

Use: Formulation of preparations

SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
SU 10: Formulation [mixing] of preparations and/ or re-packaging (excluding alloys)
PROC2: Use in closed, continuous process with occasional controlled exposure **PROC3:** Use in closed batch process (synthesis or formulation) **PROC4:** Use in batch and other process (synthesis) where opportunity for exposure arises **PROC5:** Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) **PROC8b:** Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities **PROC9:** Transfer of substance or preparation into small containers (dedicated filling line, including weighing) **PROC15:** Use as laboratory reagent
ERC2: Formulation of preparations

Use: Industrial use of processing aids in processes and products, not becoming part of articles

SU 3: Industrial uses: Uses of substances as such or in preparations at industrial sites
SU 3, SU9: Industrial uses: Uses of substances as such or in preparations at industrial sites, Manufacture of fine chemicals
PC20: Products such as pH-regulators, flocculants, precipitants, neutralization agents **PC21:** Laboratory chemicals
PROC3: Use in closed batch process (synthesis or formulation) **PROC4:** Use in batch and other process (synthesis) where opportunity for exposure arises **PROC8b:** Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities **PROC9:** Transfer of substance or preparation into small containers (dedicated filling line, including weighing) **PROC10:** Roller application or brushing

PROC13: Treatment of articles by dipping and pouring **PROC15:** Use as laboratory reagent
ERC4, ERC6b, ERC1: Industrial use of processing aids in processes and products, not becoming part of articles, Industrial use of reactive processing aids, Manufacture of substances

Use: Used as laboratory reagent.

SU 22: Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
SU 3, SU 22, SU24: Industrial uses: Uses of substances as such or in preparations at industrial sites, Professional uses: Public domain (administration, education, entertainment, services, craftsmen), Scientific research and development
PC21: Laboratory chemicals
PROC15: Use as laboratory reagent
ERC4, ERC8a: Industrial use of processing aids in processes and products, not becoming part of articles, Wide dispersive indoor use of processing aids in open systems

1. Short title of Exposure Scenario: Manufacturing and on-site use

Main User Groups	:	**SU 3**
Sectors of end-use	:	**SU 3, SU9**
Chemical product category	:	**PC19**
Process categories	:	**PROC1, PROC2, PROC3, PROC4, PROC8b, PROC9, PROC15**
Environmental Release Categories	:	**ERC1:**

2. Exposure scenario

2.1 Contributing scenario controlling environmental exposure for: ERC1

Product characteristics

Concentration of the Substance in Mixture/Article	:	Covers the percentage of the substance in the product up to 100 % (unless stated differently).

2.2 Contributing scenario controlling worker exposure for: PROC1, PROC2, PROC3, PROC4, PROC8b, PROC9, PROC15, PC19

Product characteristics

Concentration of the Substance in Mixture/Article	:	Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Physical Form (at time of use)	:	Medium volatile liquid

Frequency and duration of use
Application duration : > 4 h
Frequency of use : 220 days/year

Other operational conditions affecting workers exposure
Outdoor / Indoor : Indoor

Technical conditions and measures
Provide adequate ventilation., Good work practice required.

Organizational measures to prevent /limit releases, dispersion and exposure
Ensure operatives are trained to minimize exposures.

Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374., For personal protection see section 8.

3. Exposure estimation and reference to its source

Environment

A chemical safety assessment was performed according REACH Article 14(3), Annex I, sections 3 (Environmental Hazard assessment) and 4 (PBT/vPvB Assessment). As no hazard was identified, an exposure assessment and risk characterisation is not necessary (REACH Annex I section 5.0).

Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value	Level of Exposure	RCR*
PROC1	ECETOC TRA	Without Local Exhaust Ventilation	Inhalation	0.026 mg/m³	0
PROC1	ECETOC TRA	Without Local Exhaust Ventilation	Dermal	0.034 mg/kg BW/d	0.001
PROC2	ECETOC TRA	Without Local Exhaust Ventilation	Dermal	1.371 mg/kg BW/d	0.022
PROC2	ECETOC TRA	Without Local Exhaust Ventilation	Inhalation	12.849 mg/m³	0.018
PROC3	ECETOC TRA	Without Local Exhaust Ventilation	Inhalation	25.699 mg/m³	0.035
PROC3	ECETOC TRA	Without Local Exhaust Ventilation	Dermal	0.686 mg/kg BW/d	0.011
PROC4	ECETOC TRA	Without Local Exhaust Ventilation	Dermal	6.857 mg/kg BW/d	0.109
PROC4	ECETOC TRA	Without Local	Inhalation	128.494	0.175

		Exhaust Ventilation		mg/m³	
PROC8b	ECETOC TRA	Without Local Exhaust Ventilation	Dermal	13.714 mg/kg BW/d	0.218
PROC8b	ECETOC TRA	Without Local Exhaust Ventilation	Inhalation	64.247 mg/m³	0.088
PROC9	ECETOC TRA	Without Local Exhaust Ventilation	Inhalation	128.494 mg/m³	0.175
PROC9	ECETOC TRA	Without Local Exhaust Ventilation	Dermal	6.857 mg/kg BW/d	0.109
PROC15	ECETOC TRA	Without Local Exhaust Ventilation	Dermal	0.343 mg/kg BW/d	0.005
PROC15	ECETOC TRA	Without Local Exhaust Ventilation	Inhalation	25.699 mg/m³	0.035

*Risk characterisation ratio

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Please refer to the following documents: ECHA Guidance on information requirements and chemical safety assessment Part D: Exposure Scenario Building, Part E: Risk Characterisation and Part G: Extending the SDS; VCI/Cefic REACH Practical Guides on Exposure Assessment and Communications in the Supply Chain; CEFIC Guidance Specific Environmental Release Categories (SPERCs).

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1. Short title of Exposure Scenario: Formulation of preparations

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Main User Groups : **SU 3**
Sectors of end-use : **SU 10**
Process categories : **PROC2, PROC3, PROC4, PROC5, PROC8b, PROC9, PROC15**
Environmental Release Categories : **ERC2:**

2. Exposure scenario

2.1 Contributing scenario controlling environmental exposure for: ERC2

Product characteristics
Concentration of the Substance in Mixture/Article : Covers the percentage of the substance in the product up to 100 % (unless stated differently).

2.2 Contributing scenario controlling worker exposure for: PROC2, PROC3, PROC4, PROC5, PROC8b, PROC9, PROC15

Product characteristics
Concentration of the Substance in : Covers the percentage of the substance in the product

Mixture/Article up to 100 % (unless stated differently).
Physical Form (at time of use) : Medium volatile liquid

Frequency and duration of use
Application duration : > 4 h
Frequency of use : 220 days/year

Other operational conditions affecting workers exposure
Outdoor / Indoor : Indoor

Technical conditions and measures
Provide adequate ventilation., Good work practice required.

Organizational measures to prevent /limit releases, dispersion and exposure
Ensure operatives are trained to minimize exposures.

Conditions and measures related to personal protection, hygiene and health evaluation
Wear suitable gloves tested to EN374., For personal protection see section 8.

3. Exposure estimation and reference to its source

Environment

A chemical safety assessment was performed according REACH Article 14(3), Annex I, sections 3 (Environmental Hazard assessment) and 4 (PBT/vPvB Assessment). As no hazard was identified, an exposure assessment and risk characterisation is not necessary (REACH Annex I section 5.0).

Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value	Level of Exposure	RCR*
PROC2	ECETOC TRA	Without Local Exhaust Ventilation	Inhalation	12.849 mg/m³	0.018
PROC2	ECETOC TRA	Without Local Exhaust Ventilation	Dermal	1.371 mg/kg BW/d	0.022
PROC3	ECETOC TRA	Without Local Exhaust Ventilation	Inhalation	25.699 mg/m³	0.035
PROC3	ECETOC TRA	Without Local Exhaust Ventilation	Dermal	0.686 mg/kg BW/d	0.011
PROC4	ECETOC TRA	Without Local Exhaust Ventilation	Dermal	6.857 mg/kg BW/d	0.109
PROC4	ECETOC TRA	Without Local Exhaust Ventilation	Inhalation	128.494 mg/m³	0.175
PROC5	ECETOC TRA	Without Local Exhaust	Dermal	13.714 mg/kg BW/d	0.218

		Ventilation			
PROC5	ECETOC TRA	Without Local Exhaust Ventilation	Inhalation	256.988 mg/m³	0.35
PROC8b	ECETOC TRA	Without Local Exhaust Ventilation	Dermal	13.714 mg/kg BW/d	0.218
PROC8b	ECETOC TRA	Without Local Exhaust Ventilation	Inhalation	64.247 mg/m³	0.088
PROC9	ECETOC TRA	Without Local Exhaust Ventilation	Dermal	6.857 mg/kg BW/d	0.109
PROC9	ECETOC TRA	Without Local Exhaust Ventilation	Inhalation	128.494 mg/m³	0.175
PROC15	ECETOC TRA	Without Local Exhaust Ventilation	Inhalation	25.699 mg/m³	0.035
PROC15	ECETOC TRA	Without Local Exhaust Ventilation	Dermal	0.343 mg/kg BW/d	0.005

*Risk characterisation ratio

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Please refer to the following documents: ECHA Guidance on information requirements and chemical safety assessment Part D: Exposure Scenario Building, Part E: Risk Characterisation and Part G: Extending the SDS; VCI/Cefic REACH Practical Guides on Exposure Assessment and Communications in the Supply Chain; CEFIC Guidance Specific Environmental Release Categories (SPERCs).

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1. Short title of Exposure Scenario: Industrial use of processing aids in processes and products, not becoming part of articles

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Main User Groups : **SU 3**
Sectors of end-use : **SU 3, SU9**
Chemical product category : **PC20, PC21**
Process categories : **PROC3, PROC4, PROC8b, PROC9, PROC10, PROC13, PROC15**
Environmental Release Categories : **ERC4, ERC6b, ERC1:**

2. Exposure scenario

2.1 Contributing scenario controlling environmental exposure for: ERC4, ERC6b, ERC1

Product characteristics

Concentration of the Substance in Mixture/Article : Covers the percentage of the substance in the product up to 100 % (unless stated differently).

2.2 Contributing scenario controlling worker exposure for: PROC3, PROC4, PROC8b, PROC9, PROC10, PROC13, PROC15, PC20, PC21

Product characteristics

Concentration of the Substance in Mixture/Article : Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Physical Form (at time of use) : Medium volatile liquid

Frequency and duration of use

Application duration : > 4 h
Frequency of use : 220 days/year

Other operational conditions affecting workers exposure

Outdoor / Indoor : Indoor

Technical conditions and measures

Provide adequate ventilation., Good work practice required.

Organizational measures to prevent /limit releases, dispersion and exposure

Ensure operatives are trained to minimize exposures.

Conditions and measures related to personal protection, hygiene and health evaluation

Wear suitable gloves tested to EN374., For personal protection see section 8.

3. Exposure estimation and reference to its source

Environment

A chemical safety assessment was performed according REACH Article 14(3), Annex I, sections 3 (Environmental Hazard assessment) and 4 (PBT/vPvB Assessment). As no hazard was identified, an exposure assessment and risk characterisation is not necessary (REACH Annex I section 5.0).

Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value	Level of Exposure	RCR*
PROC3	ECETOC TRA	Without Local Exhaust Ventilation	Inhalation	25.699 mg/m³	0.035
PROC3	ECETOC TRA	Without Local Exhaust Ventilation	Dermal	0.686 mg/kg BW/d	0.011
PROC4	ECETOC TRA	Without Local Exhaust Ventilation	Inhalation	128.494 mg/m³	0.175
PROC4	ECETOC TRA	Without Local Exhaust Ventilation	Dermal	6.857 mg/kg BW/d	0.109
PROC8b	ECETOC TRA	Without Local Exhaust Ventilation	Inhalation	64.247 mg/m³	0.088

PROC8b	ECETOC TRA	Without Local Exhaust Ventilation	Dermal	13.714 mg/kg BW/d	0.218
PROC9	ECETOC TRA	Without Local Exhaust Ventilation	Inhalation	128.494 mg/m³	0.175
PROC9	ECETOC TRA	Without Local Exhaust Ventilation	Dermal	6.857 mg/kg BW/d	0.109
PROC10	ECETOC TRA	Without Local Exhaust Ventilation	Inhalation	256.988 mg/m³	0.35
PROC10	ECETOC TRA	Without Local Exhaust Ventilation	Dermal	27.429 mg/kg BW/d	0.435
PROC13	ECETOC TRA	Without Local Exhaust Ventilation	Dermal	13.714 mg/kg BW/d	0.218
PROC13	ECETOC TRA	Without Local Exhaust Ventilation	Inhalation	256.988 mg/m³	0.35
PROC15	ECETOC TRA	Without Local Exhaust Ventilation	Inhalation	25.699 mg/m³	0.035
PROC15	ECETOC TRA	Without Local Exhaust Ventilation	Dermal	0.343 mg/kg BW/d	0.005

*Risk characterisation ratio

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Please refer to the following documents: ECHA Guidance on information requirements and chemical safety assessment Part D: Exposure Scenario Building, Part E: Risk Characterisation and Part G: Extending the SDS; VCI/Cefic REACH Practical Guides on Exposure Assessment and Communications in the Supply Chain; CEFIC Guidance Specific Environmental Release Categories (SPERCs).

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1. Short title of Exposure Scenario: Used as laboratory reagent.

Main User Groups : **SU 22**
Sectors of end-use : **SU 3, SU 22, SU24**
Chemical product category : **PC21**
Process categories : **PROC15**
Environmental Release Categories : **ERC4, ERC8a:**

2. Exposure scenario

2.1 Contributing scenario controlling environmental exposure for: ERC4, ERC8a

Product characteristics

Concentration of the Substance in Mixture/Article : Covers the percentage of the substance in the product up to 100 % (unless stated differently).

2.2 Contributing scenario controlling worker exposure for: PROC15, PC21

Product characteristics

Concentration of the Substance in Mixture/Article : Covers the percentage of the substance in the product up to 100 % (unless stated differently).
Physical Form (at time of use) : Medium volatile liquid

Frequency and duration of use

Application duration : > 4 h
Frequency of use : 220 days/year

Other operational conditions affecting workers exposure

Outdoor / Indoor : Indoor

Technical conditions and measures

Provide adequate ventilation., Good work practice required.

Organizational measures to prevent /limit releases, dispersion and exposure

Ensure operatives are trained to minimize exposures.

Conditions and measures related to personal protection, hygiene and health evaluation

Wear suitable gloves tested to EN374., For personal protection see section 8.

3. Exposure estimation and reference to its source

Environment

A chemical safety assessment was performed according REACH Article 14(3), Annex I, sections 3 (Environmental Hazard assessment) and 4 (PBT/vPvB Assessment). As no hazard was identified, an exposure assessment and risk characterisation is not necessary (REACH Annex I section 5.0).

Workers

Contributing Scenario	Exposure Assessment Method	Specific conditions	Value	Level of Exposure	RCR*
PROC15	ECETOC TRA	Without Local Exhaust Ventilation	Dermal	0.343 mg/kg BW/d	0.005
PROC15	ECETOC TRA	Without Local Exhaust Ventilation	Inhalation	25.699 mg/m³	0.035

*Risk characterisation ratio

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Please refer to the following documents: ECHA Guidance on information requirements and chemical safety assessment Part D: Exposure Scenario Building, Part E: Risk Characterisation and Part G: Extending the SDS; VCI/Cefic REACH Practical Guides on

Exposure Assessment and Communications in the Supply Chain; CEFIC Guidance Specific Environmental Release Categories (SPERCs).