

This safety data sheet was created pursuant to the requirements of:
UK REACH Regulations (SI 2019/758 as amended)

Supersedes date 22-Mar-2024

Revision date 19-Sep-2024

Revision Number 4

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

1.1. Product identifier

Product Code(s)	00642
Safety data sheet number	00642
Product Name	ETHYL ACETATE
Index No	607-022-00-5
EC Number	205-500-4
CAS No	141-78-6
Synonyms	ETHYL ACETATE 98 - 100%, ACETIC ACID ETHYL ESTER, ACETOXYETHANE, ETHYL ACETATE TRBG, YA 203 DIL NORMAL AE, ETHYL ACETATE PH 99.5% MIN, ETHYL ACETATE EP, ETHYL ACETATE STATOIL, ETHYL ACETATE, DT M040 DILUANT PE, ETHYL ACETATE BIO-BASED PH, ETHYL ACETATE (ETAC) CLE
Pure substance/mixture	Substance
Contains ETHYL ACETATE	
Molecular weight	88.11

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

Recommended use	Solvent Industrial use Cosmetics Additive for Agrochemicals Cleaning agent Adhesives Lubricant For further information, see attached Exposure Scenario
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1.3. Details of the supplier of the safety data sheet

Supplier

Univar Solutions UK Ltd
Aquarius House
6 Mid Point Business Park
Bradford
GBR

For further information, please contact

E-mail address	SDS.EMEA@univarsolutions.com
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306

1.4. Emergency telephone number

Emergency Telephone	SGS - +32 (0)3 575 55 55 (24h)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Flammable liquids	Category 2 - (H225)
Serious eye damage/eye irritation	Category 2 - (H319)
Specific target organ toxicity — single exposure	Category 3 - (H336)
Category 3 Narcotic effects	

2.2. Label elements

Contains ETHYL ACETATE



Signal word

Danger

Hazard statements

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

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
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/attention
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P501 - Dispose of contents/ container to an approved waste disposal plant

Additional information

This product requires tactile warnings if supplied to the general public.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	Weight-%	EC No (EU Index No)	UK REACH registration number	Classification according to GB CLP (SI 2020/1567 as amended)	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
ETHYL ACETATE 141-78-6	100%	205-500-4 (607-022-00-5)	-	(EUH066) Flam. Liq. 2 (H225) Eye Irrit. 2 (H319) STOT SE 3 (H336)	-	-	-

Full text of H- and EUH-phrases: see section 16

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (UK REACH Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice

Show this safety data sheet to the doctor in attendance.

Inhalation

Remove to fresh air. IF exposed or concerned: Get medical advice/attention.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a doctor.
Self-protection of the first aider	Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing.

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

Symptoms	May cause redness and tearing of the eyes. Burning sensation. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Inhalation	Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Eyes	Burning sensation. May cause redness and tearing of the eyes.
Dermal	Repeated exposure may cause skin dryness or cracking.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea

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

Note to doctors	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Dry chemical. Carbon dioxide (CO ₂). Water spray. Alcohol resistant foam.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Hazardous combustion products	Carbon oxides.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Cool containers with flooding quantities of water until well after fire is out.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges.
Other information	Ventilate the area. Refer to protective measures listed in Sections 7 and 8.
For emergency responders	Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions	Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.
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6.3. Methods and material for containment and cleaning up

Methods for containment	Stop leak if you can do it without risk. A vapour suppressing foam may be used to reduce vapours. Dyke far ahead of spill to collect run-off water. Keep out of drains, sewers, ditches
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and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up

Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers. Use non-sparking tools.

Prevention of secondary hazards

Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections

See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Use personal protection equipment. Avoid breathing vapours or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use with local exhaust ventilation. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Take precautionary measures against static discharge. Ground and bond all lines and equipment associated with product system. All equipment should be non-sparking and explosion proof.

General hygiene considerations

Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Ensure that eyewash stations and safety showers are close to the workstation location.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labelled containers. Do not store near combustible materials. Protect from direct sunlight.

7.3. Specific end use(s)

Specific use(s)

See section 1 for more information.

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	United Kingdom
ETHYL ACETATE 141-78-6	TWA: 734 mg/m ³ TWA: 200 ppm STEL: 1468 mg/m ³ STEL: 400 ppm

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
ETHYL ACETATE 141-78-6		63 mg/kg bw/day [4] [6]	734 mg/m ³ [4] [6] 1468 mg/m ³ [4] [7] 734 mg/m ³ [5] [6] 1468 mg/m ³ [5] [7]

[4] Systemic health effects.

[5] Local health effects.

[6] Long term.

[7] Short term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
ETHYL ACETATE 141-78-6	4.5 mg/kg bw/day [4] [6]	37 mg/kg bw/day [4] [6]	367 mg/m ³ [4] [6] 734 mg/m ³ [4] [7] 367 mg/m ³ [5] [6] 734 mg/m ³ [5] [7]

[4] Systemic health effects.

[5] Local health effects.

[6] Long term.

[7] Short term.

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
ETHYL ACETATE 141-78-6	0.24 mg/l	1.65 mg/l	0.024 mg/l		

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
ETHYL ACETATE 141-78-6	1.15 mg/kg	0.115 mg/kg	650 mg/l	0.148 mg/kg	

8.2. Exposure controls**Engineering controls**

Apply technical measures to comply with the occupational exposure limits. Ensure adequate ventilation, especially in confined areas. Use non sparking handtools and explosion-proof electric equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment**Eye/face protection**

Tight sealing safety goggles. Wear safety glasses with side shields (or goggles). Use eye protection according to EN 166.

Hand protection

Wear suitable gloves. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Gloves must conform to standard EN 374.

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
	Polyethylene (PE) PVA Butyl rubber		

Skin and body protection

Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.

Respiratory protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Gas filter, type A.

General hygiene considerations

Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Ensure that eyewash stations and safety showers are close to the workstation location.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state	Liquid
Appearance	Liquid
Colour	Colourless
Odour	Fruity.
Odour threshold	6-75 ppm

Property	Values
Melting point / freezing point	-83.8 °C
Initial boiling point and boiling range	76 - 77 °C
Flammability	
Flammability Limit in Air	

Remarks • Method

No information available.

No information available.

Upper flammability or explosive limits	11.5%	
Lower flammability or explosive limits	2.2%	
Flash point	-4 °C	Closed cup.
Autoignition temperature	427 °C	
Decomposition temperature		No information available.
pH		No information available.
pH (as aqueous solution)		No information available.
Kinematic viscosity		No information available.
Dynamic viscosity	0.45 mPa s	@ 20.0 °C.
Water solubility	80g/l	
Solubility(ies)		No information available.
Partition coefficient	log Pow: 0.68	
Vapour pressure	98.30 hPa @ 25 °C	No information available.
Relative density	0.900 - 0.903 g/cm³ @ 20°C -	No information available.
Bulk density		No information available.
Liquid Density	No information available	No information available.
Relative vapour density	3.0	
Particle characteristics		No information available.
Particle Size	No information available	
Particle Size Distribution	No information available	
Explosive properties	Not considered to be explosive.	
Oxidising properties	Does not meet the criteria for classification as oxidising	

9.2. Other information

Molecular weight 88.11 Evaporation rate 4.3 (Butyl acetate = 1)

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Stable under recommended storage conditions.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Yes.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Highly flammable liquid and vapour. Vapours can form explosive mixtures with air. Reacts with: Strong oxidising agents. Strong acids.

10.4. Conditions to avoid

Conditions to avoid Take precautionary measures against static discharges. Keep away from heat, sparks and open flame. Protect from moisture.

10.5. Incompatible materials

Incompatible materials Peroxides. Strong oxidising agents. Strong acids. Strong bases. Amines. Protect from moisture.

10.6. Hazardous decomposition products

Hazardous decomposition products Carbon oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

Inhalation May cause drowsiness or dizziness.

Eye contact Causes serious eye irritation.

Skin contact Prolonged or repeated contact may dry skin and cause irritation.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms May cause redness and tearing of the eyes. Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Acute toxicity

Numerical measures of toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
ETHYL ACETATE	> 5000 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	= 1600 mg/l (Rat) 4h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Repeated exposure may cause skin dryness or cracking.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity Based on available data the classification criteria are not met.

Carcinogenicity No information available.

Reproductive toxicity Based on available data the classification criteria are not met.

STOT - single exposure May cause drowsiness or dizziness.

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard Based on available data the classification criteria are not met.

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Not considered to be harmful to aquatic life.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
ETHYL ACETATE	NOEC : > 100 mg/l (72h) Desmodesmus Subspicatus	LC50 :230 mg/l (96h) Pimephales promelas	650 mg/l (16h) Pseudomonas putida	EC50 :165 mg/l (48h) Daphnia magna

12.2. Persistence and degradability

Persistence and degradability Readily biodegradable.

ETHYL ACETATE (141-78-6)

Method	Exposure time	Value	Results
OECD Test No. 301B: Ready Biodegradability: CO2 Evolution Test (TG 301 B)	28 days	94%	Readily biodegradable

12.3. Bioaccumulative potential

Bioaccumulation Not likely to bioaccumulate.

Bioconcentration factor (BCF) 30

Component Information

12.4. Mobility in soil

Mobility in soil Not expected to adsorb on soil.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment The product does not contain any substance(s) classified as PBT or vPvB.

Chemical name	PBT and vPvB assessment
ETHYL ACETATE	The substance is not PBT / vPvB

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.

Contaminated packaging Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number UN1173
14.2 UN proper shipping name ETHYL ACETATE
14.3 Transport hazard class(es) 3
14.4 Packing group II
14.5 Environmental hazards No
14.6 Special precautions for user
Special Provisions None
ERG Code 3L

IMDG

14.1 UN number or ID number UN1173
UN proper shipping name ETHYL ACETATE
14.3 Transport hazard class(es) 3
14.4 Packing group II
14.5 Environmental hazards No
14.6 Special precautions for user
Special Provisions None
EmS-No F-E, S-D
14.7 Maritime transport in bulk according to IMO instruments No information available

RID

14.1 UN number or ID number UN1173
14.2 UN proper shipping name ETHYL ACETATE
14.3 Transport hazard class(es) 3
14.4 Packing group II
14.5 Environmental hazards No
14.6 Special precautions for user
Special Provisions None
Classification code F1

ADR

14.1 UN number or ID number UN1173
14.2 UN proper shipping name ETHYL ACETATE
14.3 Transport hazard class(es) 3
14.4 Packing group II
14.5 Environmental hazards No
14.6 Special precautions for user
Special Provisions None
Classification code F1
Tunnel restriction code (D/E)

SECTION 15: Regulatory information

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

National regulations

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (UK REACH - Annex XIV).

This product does not contain substances subject to restriction (UK REACH - Annex XVII).

Persistent Organic Pollutants

Not applicable

Export Notification requirements

Not applicable

Dangerous substance category per COMAH Regulations 2015 (as amended)

P5c - FLAMMABLE LIQUIDS

Named dangerous substances per COMAH Regulations 2015 (as amended)

Not applicable

The Ozone-Depleting Substances Regulations 2015

Not applicable

The Biocidal Products Regulations 2001 (as amended)

Not applicable

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)

Not applicable

Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)

Not applicable

International Inventories

TSCA

Contact supplier for inventory compliance status

DSL/NDSL

Contact supplier for inventory compliance status

EINECS/ELINCS

Contact supplier for inventory compliance status

ENCS

Contact supplier for inventory compliance status

IECSC

Contact supplier for inventory compliance status

KECI

Contact supplier for inventory compliance status

PICCS

Contact supplier for inventory compliance status

AIIC

Contact supplier for inventory compliance status

NZIoC

Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIoC - New Zealand Inventory of Chemicals

15.2. Chemical safety assessment

Chemical Safety Report

A Chemical Safety Assessment has been carried out for this substance

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

EUH066 - Repeated exposure may cause skin dryness or cracking

H225 - Highly flammable liquid and vapour

H319 - Causes serious eye irritation

H336 - May cause drowsiness or dizziness

Legend

SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitisers		

Revision Note **SDS sections updated 1 9 16**

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapour	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
European Chemicals Agency (ECHA) (ECHA_API)
Environmental Protection Agency
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
U.S. National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Prepared By K Winter**Supersedes date** 22-Mar-2024**Revision date** 19-Sep-2024

This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended)
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Exposure scenario Drumming and Distribution

Identification

Product name	Ethyl Acetate
REACH registration number	01-2119475103-46-XXXX
CAS number	141-78-6
EC number	205-500-4
EU index number	607-022-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Drumming and Distribution
Main sector <u>Environment</u>	SU3 Industrial uses
Environmental release category	ERC2 Formulation into mixture
<u>Worker</u>	
Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC15 Use as laboratory reagent.

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state	Liquid
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Drumming and Distribution

Amounts used

Daily amount per site: 30 tonnes
Annual amount per site: 3000 tonnes

Environmental factors not influenced by risk management measures

Dilution Receiving surface water flow: 18000 m³/day

Risk management measures

STP details Estimated substance removal from wastewater via domestic sewage treatment: 88.2%
Assumed domestic sewage treatment plant flow: 2000 m³/day

Conditions and measures related to external treatment of waste for disposal

Waste treatment Dispose of waste or used sacks/containers according to local regulations.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid

Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Ventilation rate Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions. Provide extract ventilation to points where emissions occur.

Risk management measures

Assumes a good basic standard of occupational hygiene is implemented.

3. Exposure estimation (Environment 1)

Assessment method Used EUSES model.

Environmental release
Water: 0.3 kg/day
Air: 3 kg/day
Soil: 0 kg/day

Drumming and Distribution

Environmental exposure	Fresh water: Exposure 0.002 mg/l, PNEC 0.24 mg/l, RCR <0.01
	freshwater sediment: Exposure 0.012 mg/kg, PNEC 1.15 mg/kg, RCR 0.01
	Marine water: Exposure 0.0002295 mg/l, PNEC 0.24 mg/l, RCR <0.01
	marine sediment: Exposure 0.001 mg/kg, PNEC 1.15 mg/kg, RCR 0.011
	Effluent: Exposure 0.018 mg/l, PNEC 650 mg/l, RCR <0.01
	Agriculture soil: Exposure 0.0009315 mg/kg, PNEC 0.148 mg/kg, RCR <0.01

3. Exposure estimation (Health 1)

Assessment method	Used ECETOC TRA model.
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Drumming and Distribution

Exposure

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
Worker - inhalation, long-term - local and systemic: Exposure 0.037 mg/m³, DNEL 734 mg/m³, RCR <0.01
Worker - dermal, long-term - systemic: Exposure 0.034 mg/kg/day, DNEL 63 mg/kg/day, RCR <0.01
Worker - inhalation, short-term - local and systemic: Exposure 0.147 mg/m³, DNEL 1468 mg/m³, RCR <0.01
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
Worker - inhalation, long-term - systemic: Exposure 18.36 mg/m³, DNEL 734 mg/m³, RCR 0.025
Worker - dermal, long-term - systemic: Exposure 1.37 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.022
Worker - inhalation, short-term - local and systemic: Exposure 73.42 mg/m³, DNEL 1468 mg/m³, RCR 0.05
PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
Worker - inhalation, long-term - local and systemic: Exposure 36.71 mg/m³, DNEL 734 mg/m³, RCR 0.05
Worker - dermal, long-term - systemic: Exposure 0.69 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.011
Worker - inhalation, short-term - local and systemic: Exposure 146.8 mg/m³, DNEL 1468 mg/m³, RCR 0.1
PROC4 Chemical production where opportunity for exposure arises
Worker - inhalation, long-term - local and systemic: Exposure 7.342 mg/m³, DNEL 734 mg/m³, RCR 0.01
Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.109
Worker - inhalation, short-term - local and systemic: Exposure 29.37 mg/m³, DNEL 1468 mg/m³, RCR 0.02
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
Worker - inhalation, long-term - local and systemic: Exposure 183.6 mg/m³, DNEL 734 mg/m³, RCR 0.25
Worker - dermal, long-term - systemic: Exposure 13.71 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.218
Worker - inhalation, short-term - local and systemic: Exposure 734.2 mg/m³, DNEL 1468 mg/m³, RCR 0.5
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
Worker - inhalation, long-term - local and systemic: Exposure 91.78 mg/m³, DNEL 734 mg/m³, RCR 0.125
Worker - dermal, long-term - systemic: Exposure 13.71 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.218
Worker - inhalation, short-term - local and systemic: Exposure 367.1 mg/m³, DNEL 1468 mg/m³, RCR 0.25
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
Worker - inhalation, long-term - local and systemic: Exposure 18.36 mg/m³, DNEL 734 mg/m³, RCR 0.025
Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.109
Worker - inhalation, short-term - local and systemic: Exposure 73.42 mg/m³, DNEL 1468 mg/m³, RCR 0.05
PROC15 Use as laboratory reagent.

Drumming and Distribution

Worker - inhalation, long-term - local and systemic: Exposure 36.71 mg/m³, DNEL 734 mg/m³, RCR 0.05

Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 63 mg/kg/day, RCR <0.01

Worker - inhalation, short-term - local and systemic: Exposure 146.8 mg/m³, DNEL 1468 mg/m³, RCR 0.1

4. Guidance to check compliance with the exposure scenario (Health 1)

ECHA guidance for downstream users

Exposure scenario Formulation & (re)packing of substances and mixtures

Identification

Product name	Ethyl Acetate
REACH registration number	01-2119475103-46-XXXX
CAS number	141-78-6
EC number	205-500-4
EU index number	607-022-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Formulation & (re)packing of substances and mixtures
Main sector <u>Environment</u>	SU3 Industrial uses
Environmental release category	ERC2 Formulation into mixture
<u>Worker</u>	
Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC15 Use as laboratory reagent.

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state	Liquid
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Formulation & (re)packing of substances and mixtures

Amounts used

Daily amount per site: 8 tonnes
Annual amount per site: 1200 tonnes

Environmental factors not influenced by risk management measures

Dilution Receiving surface water flow: 18000 m³/day

Risk management measures

STP details Estimated substance removal from wastewater via domestic sewage treatment: 88.2%
Assumed domestic sewage treatment plant flow: 2000 m³/day

Conditions and measures related to external treatment of waste for disposal

Waste treatment Dispose of waste or used sacks/containers according to local regulations.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid

Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Ventilation rate Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions. Provide extract ventilation to points where emissions occur.

Risk management measures

Assumes a good basic standard of occupational hygiene is implemented.

3. Exposure estimation (Environment 1)

Assessment method Used EUSES model.

Environmental release
Water: 24 kg/day
Air: 40 kg/day
Soil: 0.08 kg/day

Formulation & (re)packing of substances and mixtures

Environmental exposure	Fresh water: Exposure 0.142 mg/l, PNEC 0.24 mg/l, RCR 0.547
	freshwater sediment: Exposure 0.848 mg/kg, PNEC 1.15 mg/kg, RCR 0.678
	Marine water: Exposure 0.014 mg/l, PNEC 0.24 mg/l, RCR 0.548
	marine sediment: Exposure 0.085 mg/kg, PNEC 1.15 mg/kg, RCR 0.68
	Effluent: Exposure 1.419 mg/l, PNEC 650 mg/l, RCR <0.01
	Agriculture soil: Exposure 0.066 mg/kg, PNEC 0.148 mg/kg, RCR 0.273

3. Exposure estimation (Health 1)

Assessment method	Used ECETOC TRA model.
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Formulation & (re)packing of substances and mixtures

Exposure

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
 Worker - inhalation, long-term - local and systemic: Exposure 0.037 mg/m³, DNEL 734 mg/m³, RCR <0.01
 Worker - dermal, long-term - systemic: Exposure 0.034 mg/kg/day, DNEL 63 mg/kg/day, RCR <0.01
 Worker - inhalation, short-term - local and systemic: Exposure 0.147 mg/m³, DNEL 1468 mg/m³, RCR <0.01
 PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
 Worker - inhalation, long-term - local and systemic: Exposure 18.36 mg/m³, DNEL 734 mg/m³, RCR 0.025
 Worker - dermal, long-term - systemic: Exposure 1.37 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.022
 Worker - inhalation, short-term - local and systemic: Exposure 73.42 mg/m³, DNEL 1468 mg/m³, RCR 0.05
 PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
 Worker - inhalation, long-term - local and systemic: Exposure 36.71 mg/m³, DNEL 734 mg/m³, RCR 0.05
 Worker - dermal, long-term - systemic: Exposure 0.69 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.011
 Worker - inhalation, short-term - local and systemic: Exposure 146.8 mg/m³, DNEL 1468 mg/m³, RCR 0.1
 PROC4 Chemical production where opportunity for exposure arises
 Worker - inhalation, long-term - local and systemic: Exposure 7.342 mg/m³, DNEL 734 mg/m³, RCR 0.01
 Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.109
 Worker - inhalation, short-term - local and systemic: Exposure 29.37 mg/m³, DNEL 1468 mg/m³, RCR 0.02
 PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
 Worker - inhalation, long-term - local and systemic: Exposure 183.6 mg/m³, DNEL 734 mg/m³, RCR 0.25
 Worker - dermal, long-term - systemic: Exposure 13.71 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.218
 Worker - inhalation, short-term - local and systemic: Exposure 734.2 mg/m³, DNEL 1468 mg/m³, RCR 0.5
 PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
 Worker - inhalation, long-term - local and systemic: Exposure 91.78 mg/m³, DNEL 734 mg/m³, RCR 0.125
 Worker - dermal, long-term - systemic: Exposure 13.71 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.218
 Worker - inhalation, short-term - local and systemic: Exposure 367.1 mg/m³, DNEL 1468 mg/m³, RCR 0.25
 PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
 Worker - inhalation, long-term - local and systemic: Exposure 18.36 mg/m³, DNEL 734 mg/m³, RCR 0.025
 Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.109
 Worker - inhalation, short-term - local and systemic: Exposure 73.42 mg/m³, DNEL 1468 mg/m³, RCR 0.05
 PROC15 Use as laboratory reagent.

Formulation & (re)packing of substances and mixtures

Worker - inhalation, long-term - local and systemic: Exposure 36.71 mg/m³, DNEL 734 mg/m³, RCR 0.05

Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 63 mg/kg/day, RCR <0.01

Worker - inhalation, short-term - local and systemic: Exposure 146.8 mg/m³, DNEL 1468 mg/m³, RCR 0.1

4. Guidance to check compliance with the exposure scenario (Health 1)

ECHA guidance for downstream users

Exposure scenario

Industrial use as an Extraction solvent and/or processing aid

Identification

Product name	Ethyl Acetate
REACH registration number	01-2119475103-46-XXXX
CAS number	141-78-6
EC number	205-500-4
EU index number	607-022-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Industrial use as an Extraction solvent and/or processing aid
Main sector	SU3 Industrial uses
<u>Environment</u>	
Environmental release category	ERC6a Use of intermediate
<u>Worker</u>	
Process category	PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC15 Use as laboratory reagent.

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state	Liquid
<u>Amounts used</u>	Daily amount per site: 1 tonnes Annual amount per site: 300 tonnes

Industrial use as an Extraction solvent and/or processing aid

Environmental factors not influenced by risk management measures

Dilution Receiving surface water flow: 18000 m³/day

Risk management measures

STP details Estimated substance removal from wastewater via domestic sewage treatment: 88.2%
Assumed domestic sewage treatment plant flow: 2000 m³/day

Conditions and measures related to external treatment of waste for disposal

Waste treatment Dispose of waste or used sacks/containers according to local regulations.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid

Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Ventilation rate Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions. Provide extract ventilation to points where emissions occur.

Risk management measures

Assumes a good basic standard of occupational hygiene is implemented.

3. Exposure estimation (Environment 1)

Assessment method Used EUSES model.

Environmental release Water: 10 kg/day
Air: 5 kg/day
Soil: 0.1 kg/day

Environmental exposure Fresh water: Exposure 0.059 mg/l, PNEC 0.229 mg/l, RCR 0.547
freshwater sediment: Exposure 0.355 mg/kg, PNEC 1.15 mg/kg, RCR 0.284
Marine water: Exposure 0.006 mg/l, PNEC 0.24 mg/l, RCR 0.229
marine sediment: Exposure 0.036 mg/kg, PNEC 1.15 mg/kg, RCR 0.285
Effluent: Exposure 0.591 mg/l, PNEC 650 mg/l, RCR <0.01
Agriculture soil: Exposure <0.01 mg/kg, PNEC 0.148 mg/kg, RCR <0.01

3. Exposure estimation (Health 1)

Industrial use as an Extraction solvent and/or processing aid

Assessment method	Used ECETOC TRA model.
Exposure	PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions Worker - inhalation, long-term - local and systemic: Exposure 18.36 mg/m³, DNEL 734 mg/m³, RCR 0.025 Worker - dermal, long-term - systemic: Exposure 1.37 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.022 Worker - inhalation, short-term - local and systemic: Exposure 73.42 mg/m³, DNEL 1468 mg/m³, RCR 0.05 PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition Worker - inhalation, long-term - local and systemic: Exposure 36.71 mg/m³, DNEL 734 mg/m³, RCR 0.05 Worker - dermal, long-term - systemic: Exposure 0.69 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.011 Worker - inhalation, short-term - local and systemic: Exposure 146.8 mg/m³, DNEL 1468 mg/m³, RCR 0.1 PROC4 Chemical production where opportunity for exposure arises Worker - inhalation, long-term - local and systemic: Exposure 7.342 mg/m³, DNEL 734 mg/m³, RCR 0.01 Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.109 Worker - inhalation, short-term - local and systemic: Exposure 29.37 mg/m³, DNEL 1468 mg/m³, RCR 0.02 PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities Worker - inhalation, long-term - local and systemic: Exposure 183.6 mg/m³, DNEL 734 mg/m³, RCR 0.25 Worker - dermal, long-term - systemic: Exposure 13.71 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.218 Worker - inhalation, short-term - local and systemic: Exposure 734.2 mg/m³, DNEL 1468 mg/m³, RCR 0.5 PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities Worker - inhalation, long-term - local and systemic: Exposure 91.78 mg/m³, DNEL 734 mg/m³, RCR 0.125 Worker - dermal, long-term - systemic: Exposure 13.71 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.218 Worker - inhalation, short-term - local and systemic: Exposure 367.1 mg/m³, DNEL 1468 mg/m³, RCR 0.25 PROC15 Use as laboratory reagent. Worker - inhalation, long-term - local and systemic: Exposure 36.71 mg/m³, DNEL 734 mg/m³, RCR 0.05 Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 63 mg/kg/day, RCR <0.01 Worker - inhalation, short-term - local and systemic: Exposure 146.8 mg/m³, DNEL 1468 mg/m³, RCR 0.1

4. Guidance to check compliance with the exposure scenario (Health 1)

ECHA guidance for downstream users

Exposure scenario

Industrial Application of Paints, Coatings and other Mixtures by Spraying

Identification

Product name	Ethyl Acetate
REACH registration number	01-2119475103-46-XXXX
CAS number	141-78-6
EC number	205-500-4
EU index number	607-022-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Industrial Application of Paints, Coatings and other Mixtures by Spraying
Main sector	SU3 Industrial uses
<u>Environment</u>	
Environmental release category	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
<u>Worker</u>	
Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC5 Mixing or blending in batch processes PROC7 Industrial spraying PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC10 Roller application or brushing PROC13 Treatment of articles by dipping and pouring. PROC14 Tableting, compression, extrusion, pelletisation, granulation PROC15 Use as laboratory reagent.

Industrial Application of Paints, Coatings and other Mixtures by Spraying

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state	Liquid
Amounts used	Daily amount per site: 1 tonnes Annual amount per site: 300 tonnes

Environmental factors not influenced by risk management measures

Dilution	Receiving surface water flow: 18000 m ³ /day
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Risk management measures

STP details	Estimated substance removal from wastewater via domestic sewage treatment: 88.2% Assumed domestic sewage treatment plant flow: 2000 m ³ /day
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Conditions and measures related to external treatment of waste for disposal

Waste treatment	Dispose of waste or used sacks/containers according to local regulations.
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2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %. Unless otherwise stated.
Frequency and duration of use	Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting	Indoor.
Temperature	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
Ventilation rate	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

Technical conditions and measures at process level (source) to prevent release

Technical protective measures	Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions. Provide extract ventilation to points where emissions occur.
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Risk management measures

Assumes a good basic standard of occupational hygiene is implemented.

3. Exposure estimation (Environment 1)

Assessment method	Used EUSES model.
Environmental release	Water: 20 kg/day Air: 980 kg/day Soil: 0 kg/day

Industrial Application of Paints, Coatings and other Mixtures by Spraying

Environmental exposure	Fresh water: Exposure 0.707 mg/l, PNEC 0.24 mg/l, RCR 0.566
	freshwater sediment: Exposure 0.119 mg/kg, PNEC 1.15 mg/kg, RCR 0.456
	Marine water: Exposure 0.012 mg/l, PNEC 0.24 mg/l, RCR 0.457
	marine sediment: Exposure 0.071 mg/kg, PNEC 1.15 mg/kg, RCR 0.567
	Effluent: Exposure 1.183 mg/l, PNEC 650 mg/l, RCR <0.01
	Agriculture soil: Exposure 0.081 mg/kg, PNEC 0.148 mg/kg, RCR 0.336

3. Exposure estimation (Health 1)

Assessment method	Used ECETOC TRA model.
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Industrial Application of Paints, Coatings and other Mixtures by Spraying

Exposure

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
Worker - inhalation, long-term - local and systemic: Exposure 0.037 mg/m³, DNEL 734 mg/m³, RCR <0.01
Worker - dermal, long-term - systemic: Exposure 0.034 mg/kg/day, DNEL 63 mg/kg/day, RCR <0.01
Worker - inhalation, short-term - local and systemic: Exposure 0.147 mg/m³, DNEL 1468 mg/m³, RCR <0.01
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
Worker - inhalation, long-term - local and systemic: Exposure 91.78 mg/m³, DNEL 734 mg/m³, RCR 0.125
Worker - dermal, long-term - systemic: Exposure 1.37 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.022
Worker - inhalation, short-term - local and systemic: Exposure 367.1 mg/m³, DNEL 1468 mg/m³, RCR 0.25
PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
Worker - inhalation, long-term - local and systemic: Exposure 36.71 mg/m³, DNEL 734 mg/m³, RCR 0.05
Worker - dermal, long-term - systemic: Exposure 0.69 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.011
Worker - inhalation, short-term - local and systemic: Exposure 146.8 mg/m³, DNEL 1468 mg/m³, RCR 0.1
PROC4 Chemical production where opportunity for exposure arises
Worker - inhalation, long-term - local and systemic: Exposure 7.342 mg/m³, DNEL 734 mg/m³, RCR 0.01
Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.109
Worker - inhalation, short-term - local and systemic: Exposure 29.37 mg/m³, DNEL 1468 mg/m³, RCR 0.02
PROC7 Industrial spraying
Worker - inhalation, long-term - local and systemic: Exposure 45.89 mg/m³, DNEL 734 mg/m³, RCR 0.063
Worker - dermal, long-term - systemic: Exposure 42.86 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.68
Worker - inhalation, short-term - local and systemic: Exposure 183.6 mg/m³, DNEL 1468 mg/m³, RCR 0.125
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
Worker - inhalation, long-term - local and systemic: Exposure 183.6 mg/m³, DNEL 734 mg/m³, RCR 0.25
Worker - dermal, long-term - systemic: Exposure 13.71 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.218
Worker - inhalation, short-term - local and systemic: Exposure 734.2 mg/m³, DNEL 1468 mg/m³, RCR 0.5
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
Worker - inhalation, long-term - local and systemic: Exposure 91.78 mg/m³, DNEL 734 mg/m³, RCR 0.125
Worker - dermal, long-term - systemic: Exposure 13.71 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.218
Worker - inhalation, short-term - local and systemic: Exposure 367.1 mg/m³, DNEL 1468 mg/m³, RCR 0.25
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

Industrial Application of Paints, Coatings and other Mixtures by Spraying

Worker - inhalation, long-term - local and systemic: Exposure 18.36 mg/m³, DNEL 734 mg/m³, RCR 0.025

Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.109

Worker - inhalation, short-term - local and systemic: Exposure 73.42 mg/m³, DNEL 1468 mg/m³, RCR 0.05

PROC10 Roller application or brushing

Worker - inhalation, long-term - local and systemic: Exposure 18.36 mg/m³, DNEL 734 mg/m³, RCR 0.025

Worker - dermal, long-term - systemic: Exposure 27.43 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.435

Worker - inhalation, short-term - local and systemic: Exposure 73.42 mg/m³, DNEL 1468 mg/m³, RCR 0.05

PROC13 Treatment of articles by dipping and pouring.

Worker - inhalation, long-term - local and systemic: Exposure 18.36 mg/m³, DNEL 734 mg/m³, RCR 0.025

Worker - dermal, long-term - systemic: Exposure 13.71 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.218

Worker - inhalation, short-term - local and systemic: Exposure 73.42 mg/m³, DNEL 1468 mg/m³, RCR 0.05

PROC14 Tableting, compression, extrusion, pelletisation, granulation

Worker - inhalation, long-term - local and systemic: Exposure 18.36 mg/m³, DNEL 734 mg/m³, RCR 0.025

Worker - dermal, long-term - systemic: Exposure 3.43 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.054

Worker - inhalation, short-term - local and systemic: Exposure 73.42 mg/m³, DNEL 1468 mg/m³, RCR 0.05

PROC15 Use as laboratory reagent.

Worker - inhalation, long-term - local and systemic: Exposure 36.71 mg/m³, DNEL 734 mg/m³, RCR 0.05

Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 63 mg/kg/day, RCR <0.01

Worker - inhalation, short-term - local and systemic: Exposure 146.8 mg/m³, DNEL 1468 mg/m³, RCR 0.1

4. Guidance to check compliance with the exposure scenario (Health 1)

ECHA guidance for downstream users

Exposure scenario

Professional application for paints, coatings, adhesives and other mixtures/products

Identification

Product name	Ethyl Acetate
REACH registration number	01-2119475103-46-XXXX
CAS number	141-78-6
EC number	205-500-4
EU index number	607-022-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Professional application for paints, coatings, adhesives and other mixtures/products
Main sector	SU22 Professional uses
<u>Environment</u>	
Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
<u>Worker</u>	
Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC5 Mixing or blending in batch processes PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring. PROC15 Use as laboratory reagent. PROC19 Manual activities involving hand contact

Professional application for paints, coatings, adhesives and other mixtures/products

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state Liquid

Risk management measures

Good practice Carefully handle the substance to minimise releases.

Conditions and measures related to external treatment of waste for disposal

Waste treatment Dispose of waste or used sacks/containers according to local regulations.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid

Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Ventilation rate Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions. Provide extract ventilation to points where emissions occur.

Risk management measures

Assumes a good basic standard of occupational hygiene is implemented.

3. Exposure estimation (Environment 1)

Assessment method Used EUSES model.

Environmental release Water: 0.014 kg/day
Air: 0.666 kg/day
Soil: 0 kg/day

Environmental exposure Fresh water: Exposure 0.0004036 mg/l, PNEC 0.24 mg/l, RCR <0.01
freshwater sediment: Exposure 0.002 mg/kg, PNEC 1.15 mg/kg, RCR <0.01
Marine water: Exposure 0.00006015 mg/l, PNEC 0.24 mg/l, RCR <0.01
marine sediment: Exposure 0.0003587 mg/kg, PNEC 1.15 mg/kg, RCR <0.01
Effluent: Exposure 0.0008041 mg/l, PNEC 650 mg/l, RCR <0.01
Agriculture soil: Exposure 0.000113 mg/kg, PNEC 0.148 mg/kg, RCR 0.336

3. Exposure estimation (Health 1)

Professional application for paints, coatings, adhesives and other mixtures/products

Assessment method	Used ECETOC TRA model.
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Professional application for paints, coatings, adhesives and other mixtures/products

Exposure

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
Worker - inhalation, long-term - local and systemic: Exposure 0.037 mg/m³, DNEL 734 mg/m³, RCR <0.01
Worker - dermal, long-term - systemic: Exposure 0.034 mg/kg/day, DNEL 63 mg/kg/day, RCR <0.01
Worker - inhalation, short-term - local and systemic: Exposure 0.147 mg/m³, DNEL 1468 mg/m³, RCR <0.01
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
Worker - inhalation, long-term - local and systemic: Exposure 73.42 mg/m³, DNEL 734 mg/m³, RCR 0.1
Worker - dermal, long-term - systemic: Exposure 1.37 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.022
Worker - inhalation, short-term - local and systemic: Exposure 293.7 mg/m³, DNEL 1468 mg/m³, RCR 0.2
PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
Worker - inhalation, long-term - local and systemic: Exposure 64.24 mg/m³, DNEL 734 mg/m³, RCR 0.088
Worker - dermal, long-term - systemic: Exposure 0.69 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.011
Worker - inhalation, short-term - local and systemic: Exposure 257 mg/m³, DNEL 1468 mg/m³, RCR 0.175
PROC4 Chemical production where opportunity for exposure arises
Worker - inhalation, long-term - local and systemic: Exposure 128.5 mg/m³, DNEL 734 mg/m³, RCR 0.175
Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.109
Worker - inhalation, short-term - local and systemic: Exposure 513.9 mg/m³, DNEL 1468 mg/m³, RCR 0.35
PROC5 Mixing or blending in batch processes
Worker - inhalation, long-term - local and systemic: Exposure 51.39 mg/m³, DNEL 734 mg/m³, RCR 0.07
Worker - dermal, long-term - systemic: Exposure 13.71 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.218
Worker - inhalation, short-term - local and systemic: Exposure 205.6 mg/m³, DNEL 1468 mg/m³, RCR 0.14
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
Worker - inhalation, long-term - local and systemic: Exposure 51.39 mg/m³, DNEL 734 mg/m³, RCR 0.07
Worker - dermal, long-term - systemic: Exposure 13.71 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.218
Worker - inhalation, short-term - local and systemic: Exposure 205.6 mg/m³, DNEL 1468 mg/m³, RCR 0.14
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
Worker - inhalation, long-term - local and systemic: Exposure 18.36 mg/m³, DNEL 734 mg/m³, RCR 0.025
Worker - dermal, long-term - systemic: Exposure 13.71 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.218
Worker - inhalation, short-term - local and systemic: Exposure 73.42 mg/m³, DNEL 1468 mg/m³, RCR 0.05
PROC11 Non industrial spraying
Worker - inhalation, long-term - local and systemic: Exposure 154.2 mg/m³, DNEL 734 mg/m³,

Professional application for paints, coatings, adhesives and other mixtures/products

RCR 0.21

Worker - dermal, long-term - systemic: Exposure 12.86 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.204

Worker - inhalation, short-term - local and systemic: Exposure 616.7 mg/m³, DNEL 1468 mg/m³, RCR 0.42

PROC10 Roller application or brushing

Worker - inhalation, long-term - local and systemic: Exposure 51.39 mg/m³, DNEL 734 mg/m³, RCR 0.07

Worker - dermal, long-term - systemic: Exposure 27.43 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.435

Worker - inhalation, short-term - local and systemic: Exposure 205.6 mg/m³, DNEL 1468 mg/m³, RCR 0.14

PROC13 Treatment of articles by dipping and pouring.

Worker - inhalation, long-term - local and systemic: Exposure 154.2 mg/m³, DNEL 734 mg/m³, RCR 0.21

Worker - dermal, long-term - systemic: Exposure 8.226 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.131

Worker - inhalation, short-term - local and systemic: Exposure 616.7 mg/m³, DNEL 1468 mg/m³, RCR 0.42

PROC19 Manual activities involving hand contact

Worker - inhalation, long-term - local and systemic: Exposure 66.08 mg/m³, DNEL 734 mg/m³, RCR 0.09

Worker - dermal, long-term - systemic: Exposure 16.97 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.269

Worker - inhalation, short-term - local and systemic: Exposure 264.3 mg/m³, DNEL 1468 mg/m³, RCR 0.18

PROC15 Use as laboratory reagent.

Worker - inhalation, long-term - local and systemic: Exposure 36.71 mg/m³, DNEL 734 mg/m³, RCR 0.05

Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 63 mg/kg/day, RCR <0.01

Worker - inhalation, short-term - local and systemic: Exposure 146.8 mg/m³, DNEL 1468 mg/m³, RCR 0.1

4. Guidance to check compliance with the exposure scenario (Health 1)

ECHA guidance for downstream users

Exposure scenario

Use as a laboratory reagent at industrial sites

Identification

Product name	Ethyl Acetate
REACH registration number	01-2119475103-46-XXXX
CAS number	141-78-6
EC number	205-500-4
EU index number	607-022-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Use as a laboratory reagent at industrial sites
Main sector	SU3 Industrial uses
<u>Environment</u>	
Environmental release category	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
<u>Worker</u>	
Process category	PROC10 Roller application or brushing PROC15 Use as laboratory reagent.

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state	Liquid
<u>Amounts used</u>	Daily amount per site: 1 tonnes Annual amount per site: 20 tonnes

Environmental factors not influenced by risk management measures

Dilution	Receiving surface water flow: 18000 m ³ /day
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Risk management measures

STP details	Estimated substance removal from wastewater via domestic sewage treatment: 88.2% Assumed domestic sewage treatment plant flow: 2000 m ³ /day
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Use as a laboratory reagent at industrial sites

Conditions and measures related to external treatment of waste for disposal

Waste treatment Dispose of waste or used sacks/containers according to local regulations.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid

Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Ventilation rate Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions. Provide extract ventilation to points where emissions occur.

Risk management measures

Assumes a good basic standard of occupational hygiene is implemented.

3. Exposure estimation (Environment 1)

Assessment method Used EUSES model.

Environmental release Water: 20 kg/day
Air: 25 kg/day
Soil: 0.1 kg/day

Environmental exposure Fresh water: Exposure 0.119 mg/l, PNEC 0.229 mg/l, RCR 0.456
freshwater sediment: Exposure 0.707 mg/kg, PNEC 1.15 mg/kg, RCR 0.566
Marine water: Exposure 0.012 mg/l, PNEC 0.24 mg/l, RCR 0.457
marine sediment: Exposure 0.071 mg/kg, PNEC 1.15 mg/kg, RCR 0.567
Effluent: Exposure 1.183 mg/l, PNEC 650 mg/l, RCR <0.01
Agriculture soil: Exposure 0.054 mg/kg, PNEC 0.148 mg/kg, RCR <0.01

3. Exposure estimation (Health 1)

Assessment method Used ECETOC TRA model.

Use as a laboratory reagent at industrial sites

Exposure

PROC10 Roller application or brushing

Worker - inhalation, long-term - local and systemic: Exposure 18.36 mg/m³, DNEL 734 mg/m³, RCR 0.025

Worker - dermal, long-term - systemic: Exposure 37.43 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.435

Worker - inhalation, short-term - local and systemic: Exposure 73.42 mg/m³, DNEL 1468 mg/m³, RCR 0.05

PROC15 Use as laboratory reagent.

Worker - inhalation, long-term - local and systemic: Exposure 36.71 mg/m³, DNEL 734 mg/m³, RCR 0.05

Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 63 mg/kg/day, RCR <0.01

Worker - inhalation, short-term - local and systemic: Exposure 146.8 mg/m³, DNEL 1468 mg/m³, RCR 0.1

4. Guidance to check compliance with the exposure scenario (Health 1)

ECHA guidance for downstream users

Exposure scenario Professional use as a laboratory reagent

Identification

Product name	Ethyl Acetate
REACH registration number	01-2119475103-46-XXXX
CAS number	141-78-6
EC number	205-500-4
EU index number	607-022-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Professional use as a laboratory reagent
Main sector	SU22 Professional uses
<u>Environment</u>	
Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
<u>Worker</u>	
Process category	PROC10 Roller application or brushing PROC15 Use as laboratory reagent.

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state	Liquid
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Risk management measures

Good practice	Carefully handle the substance to minimise releases.
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Conditions and measures related to external treatment of waste for disposal

Waste treatment	Dispose of waste or used sacks/containers according to local regulations.
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2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state	Liquid
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Professional use as a laboratory reagent

Concentration details	Covers concentrations up to 100 %. Unless otherwise stated.
<u>Frequency and duration of use</u>	Covers daily exposures up to 8 hours (unless stated differently).
<u>Other given operational conditions affecting workers exposure</u>	
Setting	Indoor.
Temperature	Assumes use at not more than 20°C above ambient temperature, unless stated differently.
Ventilation rate	Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
<u>Technical conditions and measures at process level (source) to prevent release</u>	
Technical protective measures	Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions. Provide extract ventilation to points where emissions occur.
<u>Risk management measures</u>	Assumes a good basic standard of occupational hygiene is implemented.

3. Exposure estimation (Environment 1)

Assessment method	Used EUSES model.
Environmental release	Water: 2 kg/day Air: 2 kg/day Soil: 0 kg/day
Environmental exposure	Fresh water: Exposure 0.012 mg/l, PNEC 0.229 mg/l, RCR 0.047 freshwater sediment: Exposure 0.072 mg/kg, PNEC 1.15 mg/kg, RCR 0.058 Marine water: Exposure 0.0001 mg/l, PNEC 0.24 mg/l, RCR 0.047 marine sediment: Exposure 0.007 mg/kg, PNEC 1.15 mg/kg, RCR 0.059 Effluent: Exposure 0.118 mg/l, PNEC 650 mg/l, RCR <0.01 Agriculture soil: Exposure 0.0006 mg/kg, PNEC 0.148 mg/kg, RCR 0.023

3. Exposure estimation (Health 1)

Assessment method	Used ECETOC TRA model.
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Professional use as a laboratory reagent

Exposure

PROC10 Roller application or brushing

Worker - inhalation, long-term - local and systemic: Exposure 73.42 mg/m³, DNEL 734 mg/m³, RCR 0.1

Worker - dermal, long-term - systemic: Exposure 27.43 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.435

Worker - inhalation, short-term - local and systemic: Exposure 293.7 mg/m³, DNEL 1468 mg/m³, RCR 0.2

PROC15 Use as laboratory reagent.

Worker - inhalation, long-term - local and systemic: Exposure 36.71 mg/m³, DNEL 734 mg/m³, RCR 0.05

Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 63 mg/kg/day, RCR <0.01

Worker - inhalation, short-term - local and systemic: Exposure 146.8 mg/m³, DNEL 1468 mg/m³, RCR 0.1

4. Guidance to check compliance with the exposure scenario (Health 1)

ECHA guidance for downstream users

Exposure scenario Professional use in agrochemicals

Identification

Product name	Ethyl Acetate
REACH registration number	01-2119475103-46-XXXX
CAS number	141-78-6
EC number	205-500-4
EU index number	607-022-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Professional use in agrochemicals
Main sector <u>Environment</u>	SU22 Professional uses
Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
<u>Worker</u>	
Process category	PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring.

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state	Liquid
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Risk management measures

Good practice	Carefully handle the substance to minimise releases.
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Conditions and measures related to external treatment of waste for disposal

Professional use in agrochemicals

Waste treatment Dispose of waste or used sacks/containers according to local regulations.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid

Concentration details Avoid using at a product concentration greater than 25%. Unless otherwise stated.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Ventilation rate Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions. Provide extract ventilation to points where emissions occur.

Risk management measures

Assumes a good basic standard of occupational hygiene is implemented.

3. Exposure estimation (Environment 1)

Assessment method Used EUSES model.

Environmental release Water: 0.003 kg/day
Air: 0.247 kg/day
Soil: 0.025 kg/day

Environmental exposure Fresh water: Exposure 0.0003393 mg/l, PNEC 0.229 mg/l, RCR <0.01
freshwater sediment: Exposure 0.002 mg/kg, PNEC 1.15 mg/kg, RCR <0.01
Marine water: Exposure 0.00005372 mg/l, PNEC 0.24 mg/l, RCR <0.01
marine sediment: Exposure 0.0003204 mg/kg, PNEC 1.15 mg/kg, RCR <0.01
Effluent: Exposure 0.000162 mg/l, PNEC 650 mg/l, RCR <0.01
Agriculture soil: Exposure 0.00009985 mg/kg, PNEC 0.148 mg/kg, RCR <0.01

3. Exposure estimation (Health 1)

Assessment method Used ECETOC TRA model.

Professional use in agrochemicals

Exposure

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

Worker - inhalation, long-term - local and systemic: Exposure 44.05 mg/m³, DNEL 734 mg/m³, RCR 0.06

Worker - dermal, long-term - systemic: Exposure 0.822 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.013

Worker - inhalation, short-term - local and systemic: Exposure 176.2 mg/m³, DNEL 1468 mg/m³, RCR 0.12

PROC4 Chemical production where opportunity for exposure arises

Worker - inhalation, long-term - local and systemic: Exposure 33.04 mg/m³, DNEL 734 mg/m³, RCR 0.045

Worker - dermal, long-term - systemic: Exposure 4.116 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.065

Worker - inhalation, short-term - local and systemic: Exposure 132.2 mg/m³, DNEL 1468 mg/m³, RCR 0.09

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

Worker - inhalation, long-term - local and systemic: Exposure 220.3 mg/m³, DNEL 734 mg/m³, RCR 0.3

Worker - dermal, long-term - systemic: Exposure 8.226 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.131

Worker - inhalation, short-term - local and systemic: Exposure 205.6 mg/m³, DNEL 1468 mg/m³, RCR 0.14

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

Worker - inhalation, long-term - local and systemic: Exposure 33.04 mg/m³, DNEL 734 mg/m³, RCR 0.045

Worker - dermal, long-term - systemic: Exposure 8.226 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.131

Worker - inhalation, short-term - local and systemic: Exposure 132.2 mg/m³, DNEL 1468 mg/m³, RCR 0.09

PROC11 Non industrial spraying

Worker - inhalation, long-term - local and systemic: Exposure 220.3 mg/m³, DNEL 734 mg/m³, RCR 0.3

Worker - dermal, long-term - systemic: Exposure 12.86 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.204

Worker - inhalation, short-term - local and systemic: Exposure 881.1 mg/m³, DNEL 1468 mg/m³, RCR 0.6

PROC13 Treatment of articles by dipping and pouring.

Worker - inhalation, long-term - local and systemic: Exposure 66.08 mg/m³, DNEL 734 mg/m³, RCR 0.09

Worker - dermal, long-term - systemic: Exposure 8.226 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.131

Worker - inhalation, short-term - local and systemic: Exposure 264.3 mg/m³, DNEL 1468 mg/m³, RCR 0.18

4. Guidance to check compliance with the exposure scenario (Health 1)

ECHA guidance for downstream users

Exposure scenario Industrial use in Cleaning Agents

Identification

Product name	Ethyl Acetate
REACH registration number	01-2119475103-46-XXXX
CAS number	141-78-6
EC number	205-500-4
EU index number	607-022-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Industrial use in Cleaning Agents
Main sector	SU3 Industrial uses
<u>Environment</u>	
Environmental release category	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
<u>Worker</u>	
Process category	PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC7 Industrial spraying PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC10 Roller application or brushing PROC13 Treatment of articles by dipping and pouring.

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state	Liquid
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Amounts used

Industrial use in Cleaning Agents

Daily amount per site: 1.2 tonnes
Annual amount per site: 25 tonnes

Environmental factors not influenced by risk management measures

Dilution Receiving surface water flow: 18000 m³/day

Risk management measures

STP details Estimated substance removal from wastewater via domestic sewage treatment: 88.2%
Assumed domestic sewage treatment plant flow: 2000 m³/day

Conditions and measures related to external treatment of waste for disposal

Waste treatment Dispose of waste or used sacks/containers according to local regulations.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid

Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Ventilation rate Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions. Provide extract ventilation to points where emissions occur.

Risk management measures

Assumes a good basic standard of occupational hygiene is implemented.

3. Exposure estimation (Environment 1)

Assessment method Used EUSES model.

Environmental release
Water: 0.125 kg/day
Air: 375 kg/day
Soil: 0 kg/day

Environmental exposure
Fresh water: Exposure 0.001 mg/l, PNEC 0.24 mg/l, RCR <0.01
freshwater sediment: Exposure 0.006 mg/kg, PNEC 1.15 mg/kg, RCR <0.01
Marine water: Exposure 0.000126 mg/l, PNEC 0.24 mg/l, RCR <0.01
marine sediment: Exposure 0.0007515 mg/kg, PNEC 1.15 mg/kg, RCR <0.01
Effluent: Exposure 0.007 mg/l, PNEC 650 mg/l, RCR <0.01
Agriculture soil: Exposure 0.001 mg/kg, PNEC 0.148 mg/kg, RCR <0.01

Industrial use in Cleaning Agents

3. Exposure estimation (Health 1)

Assessment method Used ECETOC TRA model.

Industrial use in Cleaning Agents

Exposure

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

Worker - inhalation, long-term - local and systemic: Exposure 18.36 mg/m³, DNEL 734 mg/m³, RCR 0.025

Worker - dermal, long-term - systemic: Exposure 1.37 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.022

Worker - inhalation, short-term - local and systemic: Exposure 73.42 mg/m³, DNEL 1468 mg/m³, RCR 0.05

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

Worker - inhalation, long-term - local and systemic: Exposure 36.71 mg/m³, DNEL 734 mg/m³, RCR 0.05

Worker - dermal, long-term - systemic: Exposure 0.69 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.011

Worker - inhalation, short-term - local and systemic: Exposure 146.8 mg/m³, DNEL 1468 mg/m³, RCR 0.1

PROC4 Chemical production where opportunity for exposure arises

Worker - inhalation, long-term - local and systemic: Exposure 7.342 mg/m³, DNEL 734 mg/m³, RCR 0.01

Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.109

Worker - inhalation, short-term - local and systemic: Exposure 29.37 mg/m³, DNEL 1468 mg/m³, RCR 0.02

PROC7 Industrial spraying

Worker - inhalation, long-term - local and systemic: Exposure 27.53 mg/m³, DNEL 734 mg/m³, RCR 0.038

Worker - dermal, long-term - systemic: Exposure 42.86 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.68

Worker - inhalation, short-term - local and systemic: Exposure 110.1 mg/m³, DNEL 1468 mg/m³, RCR 0.075

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

Worker - inhalation, long-term - local and systemic: Exposure 18.36 mg/m³, DNEL 734 mg/m³, RCR 0.025

Worker - dermal, long-term - systemic: Exposure 13.71 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.218

Worker - inhalation, short-term - local and systemic: Exposure 73.42 mg/m³, DNEL 1468 mg/m³, RCR 0.05

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

Worker - inhalation, long-term - local and systemic: Exposure 4.589 mg/m³, DNEL 734 mg/m³, RCR <0.01

Worker - dermal, long-term - systemic: Exposure 13.71 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.218

Worker - inhalation, short-term - local and systemic: Exposure 18.36 mg/m³, DNEL 734 mg/m³, RCR 0.025

PROC10 Roller application or brushing

Worker - inhalation, long-term - local and systemic: Exposure 55.07 mg/m³, DNEL 734 mg/m³, RCR 0.075

Worker - dermal, long-term - systemic: Exposure 27.43 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.435

Worker - inhalation, short-term - local and systemic: Exposure 220.3 mg/m³, DNEL 1468 mg/m³, RCR 0.15

PROC13 Treatment of articles by dipping and pouring.

Worker - inhalation, long-term - local and systemic: Exposure 18.36 mg/m³, DNEL 734 mg/m³, RCR 0.025

Industrial use in Cleaning Agents

Worker - dermal, long-term - systemic: Exposure 13.71 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.218

Worker - inhalation, short-term - local and systemic: Exposure 73.42 mg/m³, DNEL 1468 mg/m³, RCR 0.05

4. Guidance to check compliance with the exposure scenario (Health 1)

ECHA guidance for downstream users

Exposure scenario Professional Use in Cleaning Agents

Identification

Product name	Ethyl Acetate
REACH registration number	01-2119475103-46-XXXX
CAS number	141-78-6
EC number	205-500-4
EU index number	607-022-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Professional Use in Cleaning Agents
Main sector <u>Environment</u>	SU22 Professional uses
Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
<u>Worker</u>	
Process category	PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC10 Roller application or brushing PROC11 Non industrial spraying

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state	Liquid
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Risk management measures

Good practice	Carefully handle the substance to minimise releases.
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Professional Use in Cleaning Agents

Conditions and measures related to external treatment of waste for disposal

Waste treatment Dispose of waste or used sacks/containers according to local regulations.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid

Concentration details Concentration of substance in product: 25% Unless otherwise stated.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Ventilation rate Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions. Provide extract ventilation to points where emissions occur.

Risk management measures

Assumes a good basic standard of occupational hygiene is implemented.

3. Exposure estimation (Environment 1)

Assessment method Used EUSES model.

Environmental release Water: 0.014 kg/day
Air: 0.014 kg/day
Soil: 0 kg/day

Environmental exposure Fresh water: Exposure 0.0004041 mg/l, PNEC 0.24 mg/l, RCR <0.01
freshwater sediment: Exposure 0.002 mg/kg, PNEC 1.15 mg/kg, RCR <0.01
Marine water: Exposure 0.0000602 mg/l, PNEC 0.24 mg/l, RCR <0.01
marine sediment: Exposure 0.000359 mg/kg, PNEC 1.15 mg/kg, RCR <0.01
Effluent: Exposure 0.0008101 mg/l, PNEC 650 mg/l, RCR <0.01
Agriculture soil: Exposure 0.0001295 mg/kg, PNEC 0.148 mg/kg, RCR <0.01

3. Exposure estimation (Health 1)

Assessment method Used ECETOC TRA model.

Professional Use in Cleaning Agents

Exposure

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

Worker - inhalation, long-term - local and systemic: Exposure 44.05 mg/m³, DNEL 734 mg/m³, RCR 0.06

Worker - dermal, long-term - systemic: Exposure 0.822 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.013

Worker - inhalation, short-term - local and systemic: Exposure 176.2 mg/m³, DNEL 1468 mg/m³, RCR 0.12

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

Worker - inhalation, long-term - local and systemic: Exposure 55.07 mg/m³, DNEL 734 mg/m³, RCR 0.075

Worker - dermal, long-term - systemic: Exposure 0.414 mg/kg/day, DNEL 63 mg/kg/day, RCR <0.01

Worker - inhalation, short-term - local and systemic: Exposure 220.3 mg/m³, DNEL 1468 mg/m³, RCR 0.15

PROC4 Chemical production where opportunity for exposure arises

Worker - inhalation, long-term - local and systemic: Exposure 77.09 mg/m³, DNEL 734 mg/m³, RCR 0.105

Worker - dermal, long-term - systemic: Exposure 4.116 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.065

Worker - inhalation, short-term - local and systemic: Exposure 308.4 mg/m³, DNEL 1468 mg/m³, RCR 0.21

PROC11 Non industrial spraying

Worker - inhalation, long-term - local and systemic: Exposure 128.5 mg/m³, DNEL 734 mg/m³, RCR 0.175

Worker - dermal, long-term - systemic: Exposure 21.43 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.34

Worker - inhalation, short-term - local and systemic: Exposure 513.9 mg/m³, DNEL 1468 mg/m³, RCR 0.35

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

Worker - inhalation, long-term - local and systemic: Exposure 15.42 mg/m³, DNEL 734 mg/m³, RCR 0.021

Worker - dermal, long-term - systemic: Exposure 8.226 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.131

Worker - inhalation, short-term - local and systemic: Exposure 61.67 mg/m³, DNEL 1468 mg/m³, RCR 0.042

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

Worker - inhalation, long-term - local and systemic: Exposure 33.04 mg/m³, DNEL 734 mg/m³, RCR 0.045

Worker - dermal, long-term - systemic: Exposure 8.226 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.131

Worker - inhalation, short-term - local and systemic: Exposure 132.2 mg/m³, DNEL 734 mg/m³, RCR 0.09

PROC10 Roller application or brushing

Worker - inhalation, long-term - local and systemic: Exposure 66.08 mg/m³, DNEL 734 mg/m³, RCR 0.09

Worker - dermal, long-term - systemic: Exposure 16.46 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.261

Worker - inhalation, short-term - local and systemic: Exposure 264.3 mg/m³, DNEL 1468 mg/m³, RCR 0.18

PROC13 Treatment of articles by dipping and pouring.

Worker - inhalation, long-term - local and systemic: Exposure 66.08 mg/m³, DNEL 734 mg/m³, RCR 0.09

Professional Use in Cleaning Agents

Worker - dermal, long-term - systemic: Exposure 8.226 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.131

Worker - inhalation, short-term - local and systemic: Exposure 264.3 mg/m³, DNEL 1468 mg/m³, RCR 0.18

4. Guidance to check compliance with the exposure scenario (Health 1)

ECHA guidance for downstream users

Exposure scenario Industrial use in lubricants

Identification

Product name	Ethyl Acetate
REACH registration number	01-2119475103-46-XXXX
CAS number	141-78-6
EC number	205-500-4
EU index number	607-022-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Industrial use in lubricants
Main sector	SU3 Industrial uses
<u>Environment</u>	
Environmental release category	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
<u>Worker</u>	
Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC7 Industrial spraying PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC10 Roller application or brushing PROC13 Treatment of articles by dipping and pouring. PROC17 Lubrication at high energy conditions in metal working operations PROC18 General greasing/lubrication at high kinetic energy conditions

Industrial use in lubricants

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state Liquid

Amounts used

Daily amount per site: 1.2 tonnes
Annual amount per site: 25 tonnes

Environmental factors not influenced by risk management measures

Dilution Receiving surface water flow: 18000 m³/day

Risk management measures

STP details Estimated substance removal from wastewater via domestic sewage treatment: 88.2%
Assumed domestic sewage treatment plant flow: 2000 m³/day

Conditions and measures related to external treatment of waste for disposal

Waste treatment Dispose of waste or used sacks/containers according to local regulations.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid

Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Ventilation rate Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions. Provide extract ventilation to points where emissions occur.

Risk management measures

PROC7 Industrial spraying
Wear a respirator providing a minimum efficiency of (%): 90
Wear gloves to EN374 resistant to the solvent(s) in use.

Assumes a good basic standard of occupational hygiene is implemented.

3. Exposure estimation (Environment 1)

Assessment method Used EUSES model.

Industrial use in lubricants

Environmental release	Water: 1.25 kg/day Air: 3.75 kg/day Soil: 1.25 kg/day
Environmental exposure	Fresh water: Exposure 0.008 mg/l, PNEC 0.24 mg/l, RCR 0.03 freshwater sediment: Exposure 0.046 mg/kg, PNEC 1.15 mg/kg, RCR 0.037 Marine water: Exposure 0.0007912 mg/l, PNEC 0.24 mg/l, RCR 0.03 marine sediment: Exposure 0.005 mg/kg, PNEC 1.15 mg/kg, RCR 0.038 Effluent: Exposure 0.074 mg/l, PNEC 650 mg/l, RCR <0.01 Agriculture soil: Exposure 0.003 mg/kg, PNEC 0.148 mg/kg, RCR 0.015

3. Exposure estimation (Health 1)

Assessment method	Used ECETOC TRA model.
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Industrial use in lubricants

Exposure

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
Worker - inhalation, long-term - local and systemic: Exposure 0.037 mg/m³, DNEL 734 mg/m³, RCR <0.01
Worker - dermal, long-term - systemic: Exposure 0.034 mg/kg/day, DNEL 63 mg/kg/day, RCR <0.01
Worker - inhalation, short-term - local and systemic: Exposure 0.147 mg/m³, DNEL 1468 mg/m³, RCR <0.01
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
Worker - inhalation, long-term - local and systemic: Exposure 18.36 mg/m³, DNEL 734 mg/m³, RCR 0.025
Worker - dermal, long-term - systemic: Exposure 1.37 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.022
Worker - inhalation, short-term - local and systemic: Exposure 73.42 mg/m³, DNEL 1468 mg/m³, RCR 0.05
PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
Worker - inhalation, long-term - local and systemic: Exposure 36.71 mg/m³, DNEL 734 mg/m³, RCR 0.05
Worker - dermal, long-term - systemic: Exposure 0.69 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.011
Worker - inhalation, short-term - local and systemic: Exposure 146.8 mg/m³, DNEL 1468 mg/m³, RCR 0.1
PROC4 Chemical production where opportunity for exposure arises
Worker - inhalation, long-term - local and systemic: Exposure 7.342 mg/m³, DNEL 734 mg/m³, RCR 0.01
Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.109
Worker - inhalation, short-term - local and systemic: Exposure 29.37 mg/m³, DNEL 1468 mg/m³, RCR 0.02
PROC7 Industrial spraying
Worker - inhalation, long-term - local and systemic: Exposure 91.78 mg/m³, DNEL 734 mg/m³, RCR 0.125
Worker - dermal, long-term - systemic: Exposure 8.572 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.136
Worker - inhalation, short-term - local and systemic: Exposure 367.1 mg/m³, DNEL 1468 mg/m³, RCR 0.25
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
Worker - inhalation, long-term - local and systemic: Exposure 183.6 mg/m³, DNEL 734 mg/m³, RCR 0.25
Worker - dermal, long-term - systemic: Exposure 13.71 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.218
Worker - inhalation, short-term - local and systemic: Exposure 734.2 mg/m³, DNEL 1468 mg/m³, RCR 0.5
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
Worker - inhalation, long-term - local and systemic: Exposure 91.78 mg/m³, DNEL 734 mg/m³, RCR 0.125
Worker - dermal, long-term - systemic: Exposure 13.71 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.218
Worker - inhalation, short-term - local and systemic: Exposure 367.1 mg/m³, DNEL 734 mg/m³, RCR 0.25
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

Industrial use in lubricants

Worker - inhalation, long-term - local and systemic: Exposure 55.07 mg/m³, DNEL 734 mg/m³, RCR 0.075

Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.109

Worker - inhalation, short-term - local and systemic: Exposure 220.3 mg/m³, DNEL 1468 mg/m³, RCR 0.15

PROC10 Roller application or brushing

Worker - inhalation, long-term - local and systemic: Exposure 55.07 mg/m³, DNEL 734 mg/m³, RCR 0.075

Worker - dermal, long-term - systemic: Exposure 27.43 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.435

Worker - inhalation, short-term - local and systemic: Exposure 220.3 mg/m³, DNEL 1468 mg/m³, RCR 0.15

PROC13 Treatment of articles by dipping and pouring.

Worker - inhalation, long-term - local and systemic: Exposure 128.5 mg/m³, DNEL 734 mg/m³, RCR 0.175

Worker - dermal, long-term - systemic: Exposure 13.71 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.218

Worker - inhalation, short-term - local and systemic: Exposure 513.9 mg/m³, DNEL 1468 mg/m³, RCR 0.35

PROC17 Lubrication at high energy conditions in metal working operations

Worker - inhalation, long-term - local and systemic: Exposure 18.36 mg/m³, DNEL 734 mg/m³, RCR 0.025

Worker - dermal, long-term - systemic: Exposure 27.43 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.435

Worker - inhalation, short-term - local and systemic: Exposure 73.42 mg/m³, DNEL 1468 mg/m³, RCR 0.05

PROC18 General greasing/lubrication at high kinetic energy conditions

Worker - inhalation, long-term - local and systemic: Exposure 18.36 mg/m³, DNEL 734 mg/m³, RCR 0.025

Worker - dermal, long-term - systemic: Exposure 13.71 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.218

Worker - inhalation, short-term - local and systemic: Exposure 73.42 mg/m³, DNEL 1468 mg/m³, RCR 0.05

4. Guidance to check compliance with the exposure scenario (Health 1)

ECHA guidance for downstream users

Exposure scenario Professional use in lubricants

Identification

Product name	Ethyl Acetate
REACH registration number	01-2119475103-46-XXXX
CAS number	141-78-6
EC number	205-500-4
EU index number	607-022-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Professional use in lubricants
Main sector	SU22 Professional uses
<u>Environment</u>	
Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
<u>Worker</u>	
Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring. PROC17 Lubrication at high energy conditions in metal working operations PROC18 General greasing/lubrication at high kinetic energy conditions PROC20 Use of functional fluids in small devices

Professional use in lubricants

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state Liquid

Risk management measures

Good practice Carefully handle the substance to minimise releases.

Conditions and measures related to external treatment of waste for disposal

Waste treatment Dispose of waste or used sacks/containers according to local regulations.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid

Concentration details Concentration of substance in product: 100% Unless otherwise stated.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Other given operational conditions affecting workers exposure

Setting Indoor.

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Ventilation rate Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

Technical conditions and measures at process level (source) to prevent release

Technical protective measures Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions. Provide extract ventilation to points where emissions occur.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures PROC11 Non industrial spraying Limit the substance content in the product to 25%.

Risk management measures

PROC11 Non industrial spraying
Without local exhaust ventilation
Wear a respirator providing a minimum efficiency of (%): 90
Wear gloves to EN374 resistant to the solvent(s) in use.
PROC10 Roller application or brushing

Assumes a good basic standard of occupational hygiene is implemented.

3. Exposure estimation (Environment 1)

Assessment method Used EUSES model.

Environmental release Water: 0.014 kg/day
Air: 0.014 kg/day
Soil: 0 kg/day

Professional use in lubricants

Environmental exposure	Fresh water: Exposure 0.0004041 mg/l, PNEC 0.24 mg/l, RCR <0.01
	freshwater sediment: Exposure 0.002 mg/kg, PNEC 1.15 mg/kg, RCR <0.01
	Marine water: Exposure 0.0000602 mg/l, PNEC 0.24 mg/l, RCR <0.01
	marine sediment: Exposure 0.000359 mg/kg, PNEC 1.15 mg/kg, RCR <0.01
	Effluent: Exposure 0.0008101 mg/l, PNEC 650 mg/l, RCR <0.01
	Agriculture soil: Exposure 0.0001295 mg/kg, PNEC 0.148 mg/kg, RCR <0.01

3. Exposure estimation (Health 1)

Assessment method	Used ECETOC TRA model.
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Professional use in lubricants

Exposure

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
Worker - inhalation, long-term - local and systemic: Exposure 0.037 mg/m³, DNEL 734 mg/m³, RCR <0.01
Worker - dermal, long-term - systemic: Exposure 0.034 mg/kg/day, DNEL 63 mg/kg/day, RCR <0.01
Worker - inhalation, short-term - local and systemic: Exposure 0.147 mg/m³, DNEL 1468 mg/m³, RCR <0.01
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
Worker - inhalation, long-term - local and systemic: Exposure 73.42 mg/m³, DNEL 734 mg/m³, RCR 0.1
Worker - dermal, long-term - systemic: Exposure 1.37 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.022
Worker - inhalation, short-term - local and systemic: Exposure 293.7 mg/m³, DNEL 1468 mg/m³, RCR 0.2
PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
Worker - inhalation, long-term - local and systemic: Exposure 64.24 mg/m³, DNEL 734 mg/m³, RCR 0.088
Worker - dermal, long-term - systemic: Exposure 0.69 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.011
Worker - inhalation, short-term - local and systemic: Exposure 257 mg/m³, DNEL 1468 mg/m³, RCR 0.175
PROC4 Chemical production where opportunity for exposure arises
Worker - inhalation, long-term - local and systemic: Exposure 36.71 mg/m³, DNEL 734 mg/m³, RCR 0.05
Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.109
Worker - inhalation, short-term - local and systemic: Exposure 146.8 mg/m³, DNEL 1468 mg/m³, RCR 0.1
PROC11 Non industrial spraying
Worker - inhalation, long-term - local and systemic: Exposure 220.3 mg/m³, DNEL 734 mg/m³, RCR 0.3
Worker - dermal, long-term - systemic: Exposure 12.86 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.204
Worker - inhalation, short-term - local and systemic: Exposure 881.1 mg/m³, DNEL 1468 mg/m³, RCR 0.6
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
Worker - inhalation, long-term - local and systemic: Exposure 257 mg/m³, DNEL 734 mg/m³, RCR 0.35
Worker - dermal, long-term - systemic: Exposure 13.71 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.218
Worker - inhalation, short-term - local and systemic: Exposure 1028 mg/m³, DNEL 1468 mg/m³, RCR 0.7
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
Worker - inhalation, long-term - local and systemic: Exposure 183.6 mg/m³, DNEL 734 mg/m³, RCR 0.25
Worker - dermal, long-term - systemic: Exposure 13.71 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.218
Worker - inhalation, short-term - local and systemic: Exposure 734.2 mg/m³, DNEL 1468 mg/m³, RCR 0.5
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

Professional use in lubricants

Worker - inhalation, long-term - local and systemic: Exposure 110.1 mg/m³, DNEL 734 mg/m³, RCR 0.15

Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.109

Worker - inhalation, short-term - local and systemic: Exposure 440.5 mg/m³, DNEL 1468 mg/m³, RCR 0.3

PROC10 Roller application or brushing

Worker - inhalation, long-term - local and systemic: Exposure 51.39 mg/m³, DNEL 734 mg/m³, RCR 0.07

Worker - dermal, long-term - systemic: Exposure 27.43 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.435

Worker - inhalation, short-term - local and systemic: Exposure 205.6 mg/m³, DNEL 1468 mg/m³, RCR 0.14

PROC13 Treatment of articles by dipping and pouring.

Worker - inhalation, long-term - local and systemic: Exposure 110.1 mg/m³, DNEL 734 mg/m³, RCR 0.15

Worker - dermal, long-term - systemic: Exposure 13.71 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.218

Worker - inhalation, short-term - local and systemic: Exposure 440.5 mg/m³, DNEL 1468 mg/m³, RCR 0.3

PROC17 Lubrication at high energy conditions in metal working operations

Worker - inhalation, long-term - local and systemic: Exposure 146.8 mg/m³, DNEL 734 mg/m³, RCR 0.2

Worker - dermal, long-term - systemic: Exposure 27.43 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.435

Worker - inhalation, short-term - local and systemic: Exposure 587.4 mg/m³, DNEL 1468 mg/m³, RCR 0.4

PROC18 General greasing/lubrication at high kinetic energy conditions

Worker - inhalation, long-term - local and systemic: Exposure 146.8 mg/m³, DNEL 734 mg/m³, RCR 0.2

Worker - dermal, long-term - systemic: Exposure 13.71 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.218

Worker - inhalation, short-term - local and systemic: Exposure 587.4 mg/m³, DNEL 1468 mg/m³, RCR 0.4

PROC20 Use of functional fluids in small devices

Worker - inhalation, long-term - local and systemic: Exposure 73.42 mg/m³, DNEL 734 mg/m³, RCR 0.1

Worker - dermal, long-term - systemic: Exposure 1.71 mg/kg/day, DNEL 63 mg/kg/day, RCR 0.027

Worker - inhalation, short-term - local and systemic: Exposure 293.7 mg/m³, DNEL 1468 mg/m³, RCR 0.2

4. Guidance to check compliance with the exposure scenario (Health 1)

ECHA guidance for downstream users