We create chemistry

Safety data sheet

BASF Safety data sheet according to Regulation UK SI 2019/758 and UK SI 2020/1577 as amended from time to time.
Date / Revised: 18.09.2023 Version: 8.0
Date previous version: 08.11.2022 Previous version: 7.0
Date / First version: 18.07.2002
Product: **PENTYLACETATE**

(ID no. 30034749/SDS_GEN_GB/EN)
Date of print 18.10.2025

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

1.1. Product identifier

PENTYLACETATE

Chemical name: Reaction mass of 2-methylbutyl acetate and pentyl acetate

REACH registration number: 01-2119491285-32-0000, 01-2119491285-32

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

Relevant identified uses: Chemical, solvent(s)

For the detailed identified uses of the product see appendix of the safety data sheet.

1.3. Details of the supplier of the safety data sheet

Company:
BASF SE
67056 Ludwigshafen
GERMANY

Contact address:
BASF plc
4th and 5th Floors, 2 Stockport Exchange
Railway Road, Stockport, SK1 3GG
UNITED KINGDOM

Telephone: +44 161 475 3000
E-mail address: product-safety-uk-and-ireland@basf.com

1.4. Emergency telephone number

International emergency number:
Telephone: +49 180 2273-112

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

Flam. Liq. 3 H226 Flammable liquid and vapour.

For the classifications not written out in full in this section the full text can be found in section 16.

2.2. Label elements

According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

Pictogram:

Signal Word:
Warning

Hazard Statement:

H226	Flammable liquid and vapour.

Precautionary Statements (Prevention):

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves and eye protection or face protection.
P243	Take action to prevent static discharges.

Precautionary Statements (Response):

P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

Precautionary Statements (Storage):

P403 + P235	Store in a well-ventilated place. Keep cool.

Precautionary Statements (Disposal):

P501	Dispose of contents and container to hazardous or special waste collection point.

Labeling of special preparations (GHS):
EUH066: Repeated exposure may cause skin dryness or cracking.

Hazard determining component(s) for labelling: pentyl acetate, 2-methylbutyl acetat

2.3. Other hazards

According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

See section 12 - Results of PBT and vPvB assessment.

Product does not contain a substance above legal limits included in the list established in accordance with Article 59(1) of Regulation (EC) No 1907/2006 for having endocrine disrupting properties or is identified to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Chemical nature

Reaction mass of 2-methylbutyl acetate and pentyl acetate

Hazardous ingredients (GHS)

isopentyl acetate

Content (W/W): >= 0 % - <= 4 %	Flam. Liq. 3
CAS Number: 123-92-2	Aquatic Chronic 3
EC-Number: 204-662-3	H226, H412
INDEX-Number: 607-130-00-2	EUH066

For the classifications not written out in full in this section, including the hazard classes and the hazard statements, the full text is listed in section 16.

3.2. Mixtures

Not applicable

SECTION 4: First-Aid Measures

4.1. Description of first aid measures

Remove contaminated clothing.

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention.

On skin contact:

Wash thoroughly with soap and water

On contact with eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:
Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.

4.3. Indication of any immediate medical attention and special treatment needed
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing media
Suitable extinguishing media:
dry powder, water spray, carbon dioxide, foam

Unsuitable extinguishing media for safety reasons:
water jet

Additional information:
Use extinguishing measures to suit surroundings.

5.2. Special hazards arising from the substance or mixture
Advice: Flammable liquid Cool endangered containers with water-spray. See SDS section 7 - Handling and storage.

5.3. Advice for fire-fighters
Special protective equipment:
Wear a self-contained breathing apparatus. Special protective equipment for firefighters

Further information:
Evacuate area of all unnecessary personnel. Fight fire from maximum distance.

Extend fire extinguishing measures to the surroundings. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

SECTION 6: Accidental Release Measures

High risk of slipping due to leakage/spillage of product.

Shut off or stop source of leak. Shut off or stop released substance/product under safe conditions.

Pack in tightly closed containers for disposal.

6.1. Personal precautions, protective equipment and emergency procedures
Handle in accordance with good industrial hygiene and safety practice.

6.2. Environmental precautions
Discharge into the environment must be avoided.

6.3. Methods and material for containment and cleaning up
Pick up with suitable appliance and dispose of. Spills should be contained, solidified, and placed in suitable containers for disposal. Dispose of absorbed material in accordance with regulations.

6.4. Reference to other sections
Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

SECTION 7: Handling and Storage

7.1. Precautions for safe handling
Handle in accordance with good industrial hygiene and safety practice.

Protection against fire and explosion:
Avoid all sources of ignition: heat, sparks, open flame. Ground all transfer equipment properly to prevent electrostatic discharge.

7.2. Conditions for safe storage, including any incompatibilities
Further information on storage conditions: Keep container tightly closed in a cool, well-ventilated place.

7.3. Specific end use(s)
See exposure scenario(s) in the attachment to this safety data sheet.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Components with occupational exposure limits

123-92-2: isopentyl acetate
TWA value 270 mg/m3 ; 50 ppm (WEL/EH 40 (UK))
STEL value 540 mg/m3 ; 100 ppm (OEL (EU))
indicative
TWA value 270 mg/m3 ; 50 ppm (OEL (EU))
indicative

STEL value 541 mg/m3 ; 100 ppm (WEL/EH 40 (UK))
Ceiling limit value/factor: 15 min

624-41-9: 2-methylbutyl acetat
TWA value 270 mg/m3 ; 50 ppm (WEL/EH 40 (UK))
STEL value 541 mg/m3 ; 100 ppm (WEL/EH 40 (UK))
Ceiling limit value/factor: 15 min

628-63-7: pentyl acetate
TWA value 270 mg/m3 ; 50 ppm (WEL/EH 40 (UK))
STEL value 540 mg/m3 ; 100 ppm (OEL (EU))
indicative
TWA value 270 mg/m3 ; 50 ppm (OEL (EU))
indicative
STEL value 541 mg/m3 ; 100 ppm (WEL/EH 40 (UK))
Ceiling limit value/factor: 15 min

PNEC
freshwater: 0.041 mg/l

marine water: 0.0041 mg/l

STP: 72 mg/l

soil: 0.033 mg/kg

sediment (marine water): 0.0286 mg/kg

sediment (freshwater): 0.286 mg/kg

intermittent release: 0.41 mg/l

oral (secondary poisoning):
According to EU risk assessment risks are negligible

DNEL
worker:
Long- and short-term exposure - local effects, Inhalation: 260 mg/m3

consumer:
Long- and short-term exposure - local effects, Inhalation: 130 mg/m3

8.2. Exposure controls

Personal protective equipment

Respiratory protection:
Wear respiratory protection if ventilation is inadequate. Gas filter for gases/vapours of organic compounds (boiling point >65 °C, e. g. EN 14387 Type A)

Hand protection:
Chemical resistant protective gloves (EN ISO 374-1)
Suitable materials for short-term contact (recommended: At least protective index 2, corresponding > 30 minutes of permeation time according to EN ISO 374-1)
butyl rubber (butyl) - 0.7 mm coating thickness
Manufacturer's directions for use should be observed because of great diversity of types.
Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.

Eye protection:
Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures
Wearing of closed work clothing is required additionally to the stated personal protection equipment. Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls
All appropriate measures must be taken to prevent the release of this product to the environment and to limit the dispersion of any release when it occurs. Suitable risk management measures should be in place.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Form:	liquid	
Colour:	colourless	
Odour:	ester-like	
Odour threshold:	not determined	
pH value:	7.3 (1 %(m), 20 °C)	(pH Meter)
glass transition temperature:	-82 °C	(OECD Guideline 102)
Boiling point:	144.86 °C (1,013.25 hPa)	(measured)
Flash point:	40 °C	(ISO 13736, closed cup)
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.	
Flammability:	Flammable.	(derived from flash point)

Lower explosion limit:		
	For liquids not relevant for classification and labelling., The lower explosion point may be 5 - 15 °C below the flash point.	
Upper explosion limit:		
	For liquids not relevant for classification and labelling.	
Ignition temperature:	374 °C	(Directive 92/69/EEC, A.15)
Vapour pressure:	4.91 hPa (20 °C) static	(measured)
Density:	0.875 - 0.877 g/cm3 (20 °C)	(DIN 51757)
Relative density:	0.879 (17 °C)	(OECD Guideline 109)
Relative vapour density (air):> 1		(estimated)
	(20 °C) Heavier than air.	
Solubility in water:		(OECD Guideline 105)
	1.60 g/l (20 °C, pH 4.6 - 5.8)	
Solubility (qualitative) solvent(s):	organic solvents soluble	
Partitioning coefficient n-octanol/water (log Kow):	2.1 - 2.7 (25 °C; pH value: 6.3)	(OECD Guideline 117)
Self ignition:	Based on its structural properties the product is not classified as self-igniting.	Test type: Spontaneous self-ignition at room-temperature.
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.	
Viscosity, dynamic:	0.96 mPa.s (17.8 °C)	(OECD 114)
	0.77 mPa.s (35.6 °C)	(OECD 114)
Explosion hazard:	Based on the chemical structure there is no indication of explosive properties.	
Fire promoting properties:	Based on its structural properties the product is not classified as oxidizing.	

9.2. Other information

Self heating ability:	not applicable, the product is a liquid
pKA:	
	The substance does not dissociate.

Adsorption/water - soil:	KOC: 33.79; log KOC: 1.53 Adsorption to solid soil phase is not expected.	(calculated)
Adsorption/water - soil:	KOC: 29.75; log KOC: 1.47 Adsorption to solid soil phase is not expected.	(calculated)
Adsorption/water - soil:	KOC: 28.42; log KOC: 1.45 Adsorption to solid soil phase is not expected.	(calculated)
Surface tension:	Based on chemical structure, surface activity is not to be expected.	
Grain size distribution:	The substance / product is marketed or used in a non solid or granular form.	

SECTION 10: Stability and Reactivity

10.1. Reactivity

Corrosion to metals:	Corrosive effects to metal are not anticipated.	
Formation of flammable gases:	Remarks:	Forms no flammable gases in the presence of water.

10.2. Chemical stability
The product is stable if stored and handled as prescribed/indicated.

10.3. Possibility of hazardous reactions
No hazardous reactions when stored and handled according to instructions.

10.4. Conditions to avoid
No special precautions other than good housekeeping of chemicals.

10.5. Incompatible materials

Substances to avoid:
strong oxidizing agents

10.6. Hazardous decomposition products

Hazardous decomposition products:
No hazardous decomposition products if stored and handled as prescribed/indicated.

SECTION 11: Toxicological Information

11.1. Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:

Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation.

Experimental/calculated data:
LD50 rat (oral): > 5,000 mg/kg (similar to OECD guideline 401)

LC50 rat (by inhalation): > 19.25 mg/l 4 h (similar to OECD guideline 403)
No mortality was observed. The vapour was tested.

LD50 rabbit (dermal): 8,300 mg/kg (similar to OECD guideline 402)

LD50 rabbit (dermal): > 14,000 mg/kg (similar to OECD guideline 402)

Irritation

Assessment of irritating effects:
Not irritating to the eyes. May cause slight irritation to the skin.

Experimental/calculated data:
Skin corrosion/irritation
rabbit: Slightly irritating. (similar to OECD guideline 404)

Serious eye damage/irritation
rabbit: non-irritant (similar to OECD guideline 405)

Respiratory/Skin sensitization

Assessment of sensitization:
Skin sensitizing effects were not observed in animal studies.

Experimental/calculated data:
Guinea pig maximization test guinea pig: Non-sensitizing. (OECD Guideline 406)

Germ cell mutagenicity

Assessment of mutagenicity:
The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture.

Carcinogenicity

Assessment of carcinogenicity:
No data available.

Reproductive toxicity

Assessment of reproduction toxicity:

The results of animal studies gave no indication of a fertility impairing effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. The results were determined in a Screening test (OECD 421/422).

Developmental toxicity

Assessment of teratogenicity:
No indications of a developmental toxic / teratogenic effect were seen in animal studies.

Experiences in humans

Experimental/calculated data:

Prolonged contact can result in drying of the skin.

Specific target organ toxicity (single exposure)

Assessment of STOT single:
Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

Assessment of repeated dose toxicity:
No adverse effects were observed after repeated inhalative exposure in animal studies.

Aspiration hazard

not applicable

SECTION 12: Ecological Information

12.1. Toxicity

Assessment of aquatic toxicity:
Acutely harmful for aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish:
LC50 (96 h) 69 mg/l, Pimephales promelas (APHA 1971, static)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. The details of the toxic effect relate to the nominal concentration.

Aquatic invertebrates:
EC50 (48 h) 40.9 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. The statement of the toxic effect relates to the analytically determined concentration.

Aquatic plants:
EC50 (72 h) > 466 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. The statement of the toxic effect relates to the analytically determined concentration.

Microorganisms/Effect on activated sludge:
EC20 (30 min) > 1,000 mg/l, (OECD Guideline 209, aerobic)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Chronic toxicity to fish:
No data available regarding toxicity to fish.

Chronic toxicity to aquatic invertebrates:
No data available regarding toxicity to daphnids.

Assessment of terrestrial toxicity:
No data available concerning terrestrial toxicity.

12.2. Persistence and degradability

Assessment biodegradation and elimination (H2O):
Readily biodegradable (according to OECD criteria).
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Elimination information:
87 % BOD of the ThOD (20 d) (APHA 'Standard Methods', No. 219, 1971) (aerobic, Seawater)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

72 % BOD of the ThOD (20 d) (APHA 'Standard Methods', No. 219, 1971) (aerobic, predominantly domestic sewage, non-adapted)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

57 % BOD of the ThOD (28 d) (OECD 301D; EEC 92/69, C.4-E) (aerobic, domestic sewage)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Assessment of stability in water:
No data available.
Information on Stability in Water (Hydrolysis):
No data available.

12.3. Bioaccumulative potential

Assessment bioaccumulation potential:
Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.
The product has not been tested. The statement has been derived from the properties of the individual components.

Bioaccumulation potential:
No data available.

12.4. Mobility in soil

Assessment transport between environmental compartments:
Volatility: The substance will slowly evaporate into the atmosphere from the water surface.
Adsorption in soil: Adsorption to solid soil phase is not expected.

12.5. Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative). Self classification

12.6. Other adverse effects

The substance is not listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

12.7. Additional information

Adsorbable organically-bound halogen (AOX):
This product contains no organically-bound halogen.

Other ecotoxicological advice:
Do not release untreated into natural waters.

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Dispose of in accordance with national, state and local regulations.

This product and any uncleaned containers must be disposed of as hazardous waste in accordance with the 2005 Hazardous Waste Regulations and amendments (United Kingdom)
The UK Environmental Protection (Duty of Care) Regulations (EP) and amendments should be noted (United Kingdom).

Contaminated packaging:
Disposal must be made according to official regulations.

SECTION 14: Transport Information

Land transport

ADR

UN number or ID number:	UN1104
UN proper shipping name:	AMYL ACETATES
Transport hazard class(es):	3
Packing group:	III
Environmental hazards:	no
Special precautions for user:	Tunnel code: D/E

RID

UN number or ID number:	UN1104
UN proper shipping name:	AMYL ACETATES
Transport hazard class(es):	3
Packing group:	III
Environmental hazards:	no
Special precautions for user:	None known

Inland waterway transport

ADN

UN number or ID number:	UN1104
UN proper shipping name:	AMYL ACETATES
Transport hazard class(es):	3
Packing group:	III
Environmental hazards:	no
Special precautions for user:	None known

Transport in inland waterway vessel
Not evaluated

Sea transport

IMDG

UN number or ID number:	UN 1104
UN proper shipping name:	AMYL ACETATES
Transport hazard class(es):	3
Packing group:	III
Environmental hazards:	no Marine pollutant: NO
Special precautions for user:	

Air transport

IATA/ICAO

UN number or ID number:	UN 1104
UN proper shipping name:	AMYL ACETATES
Transport hazard class(es):	3
Packing group:	III
Environmental hazards:	No Mark as dangerous for the environment is needed
Special precautions for user:	None known

14.1. UN number or ID number
See corresponding entries for “UN number or ID number” for the respective regulations in the tables above.

14.2. UN proper shipping name
See corresponding entries for “UN proper shipping name” for the respective regulations in the tables above.

14.3. Transport hazard class(es)
See corresponding entries for “Transport hazard class(es)” for the respective regulations in the tables above.

14.4. Packing group
See corresponding entries for “Packing group” for the respective regulations in the tables above.

14.5. Environmental hazards
See corresponding entries for “Environmental hazards” for the respective regulations in the tables above.

14.6. Special precautions for user
See corresponding entries for “Special precautions for user” for the respective regulations in the tables above.

14.7. Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

Further information
This product is subject to the most recent edition of "The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations" and their amendments (United Kingdom).

SECTION 15: Regulatory Information

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

Prohibitions, Restrictions and Authorizations

Annex XVII of Regulation (EC) No 1907/2006: Number on List: 3, 40

Directive 2012/18/EU - Control of Major Accident Hazards involving dangerous substances (EU):
List entry in regulation: P5a
List entry in regulation: P5b
List entry in regulation: P5c

The data should be considered when making any assessment under the Control of Substances Hazardous to Health Regulations (COSHH), and related guidance, for example, 'COSHH Essentials' (United Kingdom).
This product may be subject to the Control of Major Accident Hazards Regulations (COMAH), and amendments if specific threshold tonnages are exceeded (United Kingdom).

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

15.2. Chemical Safety Assessment

Chemical Safety Assessment performed

SECTION 16: Other Information

Assessment of the hazard classes according to UN GHS criteria (most recent version)

Flam. Liq. 3
Skin Corr./Irrit. 3
Aquatic Acute 3

Full text of the classifications, including the hazard classes and the hazard statements, if mentioned in section 2 or 3:

Flam. Liq.	Flammable liquids
Aquatic Chronic	Hazardous to the aquatic environment - chronic
H226	Flammable liquid and vapour.
H412	Harmful to aquatic life with long lasting effects.

EUH066	Repeated exposure may cause skin dryness or cracking.

Abbreviations
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road. ADN = The European Agreement concerning the International Carriage of Dangerous Goods by Inland waterways. ATE = Acute Toxicity Estimates. CAO = Cargo Aircraft Only. CAS = Chemical Abstract Service. CLP = Classification, Labelling and Packaging of substances and mixtures. DIN = German national organization for standardization. DNEL = Derived No Effect Level. EC50 = Effective concentration median for 50% of the population. EC = European Community. EN = European Standards. IARC = International Agency for Research on Cancer. IATA = International Air Transport Association. IBC-Code = Intermediate Bulk Container code. IMDG = International Maritime Dangerous Goods Code. ISO = International Organization for Standardization. STEL = Short-Term Exposure Limit. LC50 = Lethal concentration median for 50% of the population. LD50 = Lethal dose median for 50% of the population. TLV = Threshold Limit Value. MARPOL = The International Convention for the Prevention of Pollution from Ships. NEN = Dutch Norm. NOEC = No Observed Effect Concentration. OEL = Occupational Exposure Limit. OECD = Organization for Economic Cooperation and Development. PBT = Persistent, Bioaccumulative and Toxic. PNEC = Predicted No Effect Level. PPM = Parts per million. RID = The European Agreement concerning the International Carriage of Dangerous Goods by Rail. TWA = Time Weight Average. UN-number = UN number at transport. vPvB = very Persistent and very Bioaccumulative.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

Annex: Exposure Scenarios

Index

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1. Short title of exposure scenario

Formulation
ERC2; PROC3, PROC5, PROC8a, PROC9, PROC15, PROC19

Control of exposure and risk management measures

Contributing exposure scenario	
Use descriptors covered	ESVOC SpERC 2.2.v1: ESVOC SpERC 2.2.v1
Operational conditions	
Annual amount used in the EU	1,000,000 kg
Minimum emission days per year	300
Emission factor air	1 %
Emission factor water	0.5 %
Emission factor soil	0.01 %

Receive Surf. Water (Flow Rate).	18,000 m3/d
Dilution factor river	10
Dilution factor coast	100
Risk Management Measures	
Air treatment measures considered suitable are, e.g.	Wet scrubber - for dusts, Filtration, Waste gas treatment by thermal oxidation, Adsorption
Wastewater treatment measures considered suitable are, e.g.	Acclimated biological treatment, Distillation
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2,000 m3/d
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0.225825
	Risk from environmental exposure is driven by freshwater.
Maximum amount of safe use	1,476.1 kg/d
Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.

Contributing exposure scenario	
Use descriptors covered	PROC5: Mixing or blending in batch processes As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.

Contributing exposure scenario	
Use descriptors covered	PROC8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.

Contributing exposure scenario	
Use descriptors covered	PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.

Contributing exposure scenario	
Use descriptors covered	PROC15: Use a laboratory reagent. As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.

Contributing exposure scenario	
Use descriptors covered	PROC19: Manual activities involving hand contact As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.

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2. Short title of exposure scenario

Use as processing aid
ERC4; PROC1, PROC2, PROC3, PROC4, PROC8a, PROC9, PROC15

Control of exposure and risk management measures

Contributing exposure scenario	
Use descriptors covered	ESVOC SpERC 4.3a.v1: ESVOC SpERC 4.3a.v1
Operational conditions	
Annual amount used in the EU	200,000 kg
Minimum emission days per year	300
Emission factor air	98 %
Emission factor water	2 %
Emission factor soil	0 %
Receive Surf. Water (Flow Rate).	18,000 m3/d
Dilution factor river	10

Dilution factor coast	100

Risk Management Measures	
Air treatment measures considered suitable are, e.g.	Wet scrubber - for dusts, Filtration, Waste gas treatment by thermal oxidation, Adsorption
Wastewater treatment measures considered suitable are, e.g.	Acclimated biological treatment, Distillation
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2,000 m3/d

Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0.180801
	Risk from environmental exposure is driven by freshwater.
Maximum amount of safe use	368.7 kg/d
Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	PROC1: Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions. As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.

Contributing exposure scenario	
Use descriptors covered	PROC2: Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.

Contributing exposure scenario	
Use descriptors covered	PROC3: Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.

Contributing exposure scenario

Use descriptors covered	PROC4: Chemical production where opportunity for exposure arises As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.

Contributing exposure scenario	
Use descriptors covered	PROC8a: Transfer of substance or mixture (charging and discharging) at non-dedicated facilities As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.

Contributing exposure scenario	
Use descriptors covered	PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.

Contributing exposure scenario	
Use descriptors covered	PROC15: Use a laboratory reagent. As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.

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3. Short title of exposure scenario

Use in Cleaning Agents
ERC4; PROC7, PROC10, PROC13

Control of exposure and risk management measures

Contributing exposure scenario	
Use descriptors covered	ESVOC SpERC 4.4a.v1: ESVOC SpERC 4.4a.v1
Operational conditions	
Annual amount used in the EU	100,000 kg
Minimum emission days per year	20
Emission factor air	30 %
Emission factor water	0.01 %

Emission factor soil	0 %
Receive Surf. Water (Flow Rate).	18,000 m3/d
Dilution factor river	10
Dilution factor coast	100

Risk Management Measures	
Air treatment measures considered suitable are, e.g.	Wet scrubber - for dusts, Waste gas treatment by thermal oxidation, Adsorption
Wastewater treatment measures considered suitable are, e.g.	Acclimated biological treatment, Distillation
Type of STP	Municipal STP
Assumed sewage treatment plant flow (m3/d)	2,000 m3/d

Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0.012076
	Risk from environmental exposure is driven by soil.
Maximum amount of safe use	41,403 kg/d
Risk from environmental exposure is driven by soil.	

Contributing exposure scenario	
Use descriptors covered	PROC7: Industrial spraying As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.

Contributing exposure scenario	
Use descriptors covered	PROC10: Roller application or brushing As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.

Contributing exposure scenario	
Use descriptors covered	PROC13: Treatment of articles by dipping and pouring. As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.

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4. Short title of exposure scenario

Use in Coatings
ERC4; PROC7, PROC10, PROC13

Control of exposure and risk management measures

Contributing exposure scenario		
Use descriptors covered	ESVOC SpERC 4.3a.v1: ESVOC SpERC 4.3a.v1	
Operational conditions		
Annual amount used in the EU	600,000 kg	
Minimum emission days per year	300	
Emission factor air	98 %	
Emission factor water	2 %	
Emission factor soil	0 %	
Receive Surf. Water (Flow Rate).	18,000 m3/d	
Dilution factor river	10	
Dilution factor coast	100	
Risk Management Measures		
Air treatment measures considered suitable are, e.g.		Wet scrubber - for dusts, Filtration, Waste gas treatment by thermal oxidation, Adsorption
Wastewater treatment measures considered suitable are, e.g.		Acclimated biological treatment, Distillation
Type of STP		Municipal STP
Assumed sewage treatment plant flow (m3/d)		2,000 m3/d
Exposure estimate and reference to its source		
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Environment	
Risk Characterization Ratio (RCR)	0.540992	
	Risk from environmental exposure is driven by freshwater.	
Maximum amount of safe use	369.7 kg/d	
Risk from environmental exposure is driven by freshwater.		

Contributing exposure scenario	
Use descriptors covered	PROC7: Industrial spraying As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.

Contributing exposure scenario	
Use descriptors covered	PROC10: Roller application or brushing As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.

Contributing exposure scenario	
Use descriptors covered	PROC13: Treatment of articles by dipping and pouring. As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.

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5. Short title of exposure scenario

Use in Cleaning Agents, (use in professional settings)
ERC8a, ERC8d; PROC10, PROC11, PROC13

Control of exposure and risk management measures

Contributing exposure scenario		
Use descriptors covered	ESVOC SpERC 8.4b.v1: ESVOC SpERC 8.4b.v1	
Operational conditions		
Annual amount used in the EU	100,000 kg	
Minimum emission days per year	365	
Emission factor air	2 %	
Emission factor water	1 ppm	
Emission factor soil	0 %	
Receive Surf. Water (Flow Rate).	18,000 m3/d	
Dilution factor river	10	
Dilution factor coast	100	
Risk Management Measures		
Type of STP		no STP
Exposure estimate and reference to its source		
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Environment	
Risk Characterization Ratio (RCR)	0.000706	

	Risk from environmental exposure is driven by freshwater.
Maximum amount of safe use	388.2 kg/d
Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	ESVOC SpERC 8.4b.v1: ESVOC SpERC 8.4b.v1
Operational conditions	
Annual amount used in the EU	100,000 kg
Minimum emission days per year	365
Emission factor air	2 %
Emission factor water	1 ppm
Emission factor soil	0 %
Receive Surf. Water (Flow Rate).	18,000 m3/d
Dilution factor river	10
Dilution factor coast	100
Risk Management Measures	
Type of STP	no STP
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0.000706
	Risk from environmental exposure is driven by freshwater.
Maximum amount of safe use	388.2 kg/d
Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	PROC10: Roller application or brushing As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.

Contributing exposure scenario	
Use descriptors covered	PROC11: Non industrial spraying As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.

Contributing exposure scenario	
Use descriptors covered	PROC13: Treatment of articles by dipping and pouring. As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.

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6. Short title of exposure scenario

Use in Cleaning Agents, (consumer use)
ERC8a, ERC8d; PC4, PC24, PC35

Control of exposure and risk management measures

Contributing exposure scenario		
Use descriptors covered	ESVOC SpERC 8.4c.v1: ESVOC SpERC 8.4c.v1	
Operational conditions		
Annual amount used in the EU	50,000 kg	
Minimum emission days per year	365	
Emission factor air	95 %	
Emission factor water	2.5 %	
Emission factor soil	2.5 %	
Receive Surf. Water (Flow Rate).	18,000 m3/d	
Dilution factor river	10	
Dilution factor coast	100	
Risk Management Measures		
Type of STP		no STP
Exposure estimate and reference to its source		
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Environment	
Risk Characterization Ratio (RCR)	0.004882	
	Risk from environmental exposure is driven by freshwater.	
Maximum amount of safe use	28.1 kg/d	
Risk from environmental exposure is driven by freshwater.		

Contributing exposure scenario

Use descriptors covered	ESVOC SpERC 8.4c.v1: ESVOC SpERC 8.4c.v1
Operational conditions	
Annual amount used in the EU	50,000 kg
Minimum emission days per year	365
Emission factor air	95 %
Emission factor water	2.5 %
Emission factor soil	2.5 %
Receive Surf. Water (Flow Rate).	18,000 m3/d
Dilution factor river	10
Dilution factor coast	100
Risk Management Measures	
Type of STP	no STP
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0.004882
	Risk from environmental exposure is driven by freshwater.
Maximum amount of safe use	28.1 kg/d
Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	PC4: Anti-Freeze and De-icing products. As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.
Operational conditions	
Vapour pressure of the substance during use	491 Pa
Process temperature	20 °C

Contributing exposure scenario	
Use descriptors covered	PC24: Lubricants, Greases and Release Products As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.
Operational conditions	

Vapour pressure of the substance during use	491 Pa
Process temperature	20 °C

Contributing exposure scenario	
Use descriptors covered	PC35: Washing and Cleaning Products (including solvent based products). As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.
Operational conditions	
Vapour pressure of the substance during use	491 Pa
Process temperature	20 °C

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7. Short title of exposure scenario

Use in Coatings, (use in professional settings)
ERC8a, ERC8d; PROC10, PROC11, PROC13

Control of exposure and risk management measures

Contributing exposure scenario	
Use descriptors covered	ESVOC SpERC 8.3b.v1: ESVOC SpERC 8.3b.v1
Operational conditions	
Annual amount used in the EU	100,000 kg
Minimum emission days per year	365
Emission factor air	98 %
Emission factor water	1 %
Emission factor soil	1 %
Receive Surf. Water (Flow Rate).	18,000 m3/d
Dilution factor river	10
Dilution factor coast	100
Risk Management Measures	
Type of STP	no STP
Exposure estimate and reference to its source	

Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0.002376
	Risk from environmental exposure is driven by freshwater.
Maximum amount of safe use	57.7 kg/d
Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	ESVOC SpERC 8.3b.v1: ESVOC SpERC 8.3b.v1
Operational conditions	
Annual amount used in the EU	100,000 kg
Minimum emission days per year	365
Emission factor air	98 %
Emission factor water	1 %
Emission factor soil	1 %
Receive Surf. Water (Flow Rate).	18,000 m3/d
Dilution factor river	10
Dilution factor coast	100
Risk Management Measures	
Type of STP	no STP
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0.002376
	Risk from environmental exposure is driven by freshwater.
Maximum amount of safe use	57.7 kg/d
Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	PROC10: Roller application or brushing As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.

Contributing exposure scenario	
Use descriptors covered	PROC11: Non industrial spraying As no toxicological hazard was identified no human related

	(worker/consumer) exposure assessment and risk characterization was performed.

Contributing exposure scenario	
Use descriptors covered	PROC13: Treatment of articles by dipping and pouring. As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.

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8. Short title of exposure scenario

Use in Coatings, (consumer use)
ERC8a, ERC8d; PC9a, PC15, PC18, PC23

Control of exposure and risk management measures

Contributing exposure scenario		
Use descriptors covered	ESVOC SpERC 8.3c.v1: ESVOC SpERC 8.3c.v1	
Operational conditions		
Annual amount used in the EU	50,000 kg	
Minimum emission days per year	365	
Emission factor air	98.5 %	
Emission factor water	1 %	
Emission factor soil	0.5 %	
Receive Surf. Water (Flow Rate).	18,000 m3/d	
Dilution factor river	10	
Dilution factor coast	100	
Risk Management Measures		
Type of STP		no STP
Exposure estimate and reference to its source		
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Environment	
Risk Characterization Ratio (RCR)	0.002376	
	Risk from environmental exposure is driven by freshwater.	
Maximum amount of safe use	57.7 kg/d	
Risk from environmental exposure is driven by freshwater.		

Contributing exposure scenario	
Use descriptors covered	ESVOC SpERC 8.3c.v1: ESVOC SpERC 8.3c.v1
Operational conditions	
Annual amount used in the EU	50,000 kg
Minimum emission days per year	365
Emission factor air	98.5 %
Emission factor water	1 %
Emission factor soil	0.5 %
Receive Surf. Water (Flow Rate).	18,000 m3/d
Dilution factor river	10
Dilution factor coast	100
Risk Management Measures	
Type of STP	no STP
Exposure estimate and reference to its source	
Assessment method	EASY TRA v4.1, ECETOC TRA v3.0, Environment
Risk Characterization Ratio (RCR)	0.002376
	Risk from environmental exposure is driven by freshwater.
Maximum amount of safe use	57.7 kg/d
Risk from environmental exposure is driven by freshwater.	

Contributing exposure scenario	
Use descriptors covered	PC9a: Coatings and paints, thinners, paint removers As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.
Operational conditions	
Vapour pressure of the substance during use	491 Pa
Process temperature	20 °C

Contributing exposure scenario	
Use descriptors covered	PC15: Non-metal-surface treatment products. As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.

Operational conditions	
Vapour pressure of the substance during use	491 Pa
Process temperature	20 °C

Contributing exposure scenario	
Use descriptors covered	PC18: Ink and Toners. As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.
Operational conditions	
Vapour pressure of the substance during use	491 Pa
Process temperature	20 °C

Contributing exposure scenario	
Use descriptors covered	PC23: Leather tanning, dye, finishing, impregnation and care products. As no toxicological hazard was identified no human related (worker/consumer) exposure assessment and risk characterization was performed.
Operational conditions	
Vapour pressure of the substance during use	491 Pa
Process temperature	20 °C

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