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

1.1. Product identifier

Mixture identification:

Trade name: FASSAFILL EPOXY CLEANER

Trade code: 1292

UFI: 4E8D-0YU0-D91N-UGPE

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

Recommended use: Detergent for removing epoxy filler residues; For professional use only

Uses advised against: Not intended for consumer use

1.3. Details of the supplier of the safety data sheet

Company: FASSA Srl

Via Lazzaris, 3 - 31027 Spresiano (TV) - Italy

Tel. +39 0422 7222

Fax +39 0422 887509

Imported in the UK:

FASSA UK LTD

Ashchurch Business Centre,

Alexandra Way, Ashchurch, Tewkesbury GL20 8TD- UK

Tel. +44 (0) 1684.212272

Responsable: laboratorio.spresiano@fassabortolo.it

1.4. Emergency telephone number

NHS 111

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) n. 1272/2008 (CLP)

Eye Irrit. 2	Causes serious eye irritation.
Skin Sens. 1	May cause an allergic skin reaction.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Regulation (EC) No 1272/2008 (CLP):

Hazard pictograms and Signal Word

Warning

Hazard statements

H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

Precautionary statements

P261	Avoid breathing fume/gas/mist/vapours/spray.
P280	Wear protective gloves and eye/face protection.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P501	Dispose of contents/container in accordance with national regulation.

Contains:

benzyl alcohol

Special provisions according to Annex XVII of REACH and subsequent amendments:

None.

The product has been classified according to Regulation (EC) No 1272/2008 (CLP) as amended by UK CLP Regulation, UK SI 2019/720 and UK SI 2020/1567.

2.3. Other hazards

Constituents (Reg. EC 648/2004): 5 - 15% Non-ionic surfactants

No PBT, vPvB or endocrine disruptor substances present in concentration >= 0.1%.

No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Mixture identification: FASSAFILL EPOXY CLEANER

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Numb.	Classification	Registration Number:
≥15 - <20 %	benzyl alcohol	CAS:100-51-6 EC:202-859-9 Index:603-057-00-5	Acute Tox. 4, H302 Eye Irrit. 2, H319 Skin Sens. 1B, H317 Acute Toxicity Estimate: ATE - Oral: 1200mg/kg bw	01-2119492630-38-xxxx
≥7 - <10 %	potassium oleate	CAS:143-18-0 EC:205-590-5	Skin Irrit. 2, H315; Eye Irrit. 2, H319	
≥7 - <10 %	1-methoxy-2-propanol	CAS:107-98-2 EC:203-539-1 Index:603-064-00-3	Flam. Liq. 3, H226; STOT SE 3, H336	01-2119457435-35-xxxx

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

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Remove contaminated clothing immediatley and dispose off safely.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash thoroughly the body (shower or bath).

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an opthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and label hazardous.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

The symptoms and effects are as expected from the hazards as shown in section 2.

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Product is not flammable.

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Burning produces heavy smoke.

In the event of fire and/or explosion do not breathe fumes.

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non emergency personnel:

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

For emergency responders:

Wear personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

Material suitable for collection: inert absorbent material (e.g. sand, vermiculite)

After the product has been recovered, rinse the area and materials involved with water.

Retain contaminated washing water and dispose it.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Advice on general occupational hygiene:

Contamined clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a cool, well-ventilated place, away from heat.

Keep away from food, drink and feed.

Incompatible materials:

See chapter 10.5

Instructions as regards storage premises:

Adequately ventilated premises.

Protect from frost.

7.3. Specific end use(s)

Recommendation(s)

See chapter 1.2

Industrial sector specific solutions:

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Community Occupational Exposure Limits (OEL)

benzyl alcohol

CAS: 100-51-6	OEL Type	MAK	GERMANY	Long Term: 22 mg/m3 - 5 ppm; Short Term: 44 mg/m3 - 10 ppm Notes: Inhalable fraction and vapour, Skin
	OEL Type	TLV	CZECHIA	Long Term: 40 mg/m3 - 8.88 ppm; Short Term: 80 mg/m3 - 17.76 ppm
	OEL Type	SUVA	SWITZERLAND	Long Term: 22 mg/m3 - 5 ppm
	OEL Type	AGW	GERMANY	Long Term: 22 mg/m3 - 5 ppm; Short Term: 44 mg/m3 - 10 ppm Notes: Inhalable fraction and vapour
	OEL Type	NDS	POLAND	Long Term: 240 mg/m3

	OEL Type	MV	SLOVENIA	Long Term: 22 mg/m3 - 5 ppm; Short Term: 44 mg/m3 - 10 ppm Notes: Skin

1-methoxy-2-propanol

CAS: 107-98-2	OEL Type	ACGIH		Long Term: 50 ppm; Short Term: 100 ppm Notes: A4 - Eye and URT irr
	OEL Type	EU		Long Term: 375 mg/m3 - 100 ppm; Short Term: 568 mg/m3 - 150 ppm Notes: Skin
	OEL Type	MAK	AUSTRIA	Long Term: 187 mg/m3 - 50 ppm; Short Term: 187 mg/m3 - 50 ppm
	OEL Type	MAK	GERMANY	Long Term: 370 mg/m3 - 100 ppm; Short Term: 740 mg/m3 - 200 ppm
	OEL Type	VLEP	BELGIUM	Long Term: 184 mg/m3 - 50 ppm; Short Term: 369 mg/m3 - 100 ppm Notes: Additional indication "D" means that the absorption of the agent through the skin, mucous membranes or eyes is an important part of the total exposure. It can be the result of both direct contact and its presence in the air.
	OEL Type	VLEP	FRANCE	Long Term: 188 mg/m3 - 50 ppm; Short Term: 375 mg/m3 - 100 ppm
	OEL Type	VLEP	ITALY	Long Term: 375 mg/m3 - 100 ppm; Short Term: 568 mg/m3 - 150 ppm
	OEL Type	VLEP	ROMANIA	Long Term: 375 mg/m3 - 100 ppm; Short Term: 568 mg/m3 - 150 ppm
	OEL Type	TLV	CZECHIA	Long Term: 270 mg/m3 - 72.09 ppm; Short Term: 550 mg/m3 - 146.85 ppm Notes: Skin
	OEL Type	VLA	SPAIN	Long Term: 375 mg/m3 - 100 ppm; Short Term: 568 mg/m3 - 150 ppm Notes: Skin
	OEL Type	ÁK	HUNGARY	Long Term: 375 mg/m3; Short Term: 568 mg/m3
	OEL Type	VLE	PORTUGAL	Long Term: 375 mg/m3 - 100 ppm; Short Term: 568 mg/m3 - 150 ppm
	OEL Type	SUVA	SWITZERLAND	Long Term: 360 mg/m3 - 100 ppm; Short Term: 720 mg/m3 - 200 ppm
	OEL Type	WEL	U.K.	Long Term: 375 mg/m3 - 100 ppm; Short Term: 560 mg/m3 - 150 ppm
	OEL Type	GVI	CROATIA	Long Term: 375 mg/m3 - 100 ppm; Short Term: 568 mg/m3 - 150 ppm
	OEL Type	AGW	GERMANY	Long Term: 370 mg/m3 - 100 ppm; Short Term: 740 mg/m3 - 200 ppm
	OEL Type	NDS	NETHERLANDS	Long Term: 375 mg/m3; Short Term: 563 mg/m3
	OEL Type	NDS	POLAND	Long Term: 180 mg/m3; Short Term: 360 mg/m3 Notes: Skin
	OEL Type	MV	SLOVENIA	Long Term: 375 mg/m3 - 100 ppm; Short Term: 568 mg/m3 - 150 ppm Notes: Skin

Predicted No Effect Concentration (PNEC) values

benzyl alcohol

CAS: 100-51-6	Exposure Route: Fresh Water; PNEC Limit: 1 mg/l
	Exposure Route: Marine water; PNEC Limit: 0.1 mg/l
	Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 39 mg/l
	Exposure Route: Freshwater sediments; PNEC Limit: 5.27 mg/kg
	Exposure Route: Marine water sediments; PNEC Limit: 0.527 mg/kg
	Exposure Route: Soil (agricultural); PNEC Limit: 0.456 mg/kg

1-methoxy-2-propanol

CAS: 107-98-2	Exposure Route: Marine water; PNEC Limit: 1 mg/l
	Exposure Route: Fresh Water; PNEC Limit: 10 mg/l
	Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 100 mg/l
	Exposure Route: Marine water sediments; PNEC Limit: 5.2 mg/kg
	Exposure Route: Freshwater sediments; PNEC Limit: 52.3 mg/kg
	Exposure Route: Soil (agricultural); PNEC Limit: 4.59 mg/kg

Derived No Effect Level (DNEL) values

benzyl alcohol

CAS: 100-51-6	Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects Worker Professional: 110 mg/m3; Consumer: 27 mg/m3
	Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects

Worker Professional: 22 mg/m3; Consumer: 5.4 mg/m3

Exposure Route: Human Dermal; Exposure Frequency: Short Term, systemic effects
Worker Professional: 40 mg/kg; Consumer: 20 mg/kg

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 8 mg/kg; Consumer: 4 mg/kg

Exposure Route: Human Oral; Exposure Frequency: Short Term, systemic effects
Consumer: 20 mg/kg

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 4 mg/kg

1-methoxy-2-propanol

CAS: 107-98-2

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Professional: 369 mg/m3; Consumer: 43.9 mg/m3

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects
Worker Professional: 553.5 mg/m3

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects
Worker Professional: 553.5 mg/m3

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Professional: 183 mg/kg; Consumer: 78 mg/kg

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 3.3 mg/kg

8.2. Exposure controls

Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction.

Eye protection:

Eye glasses with side protection (EN 166).

Protection for skin:

Use suitable clothing that provides complete protection to the skin according to activity and exposure (EN 14605/EN 13982), e.g. overall, apron, safety shoes, suitable clothing.

Protection for hands:

There is no material or combination of materials for gloves that can guarantee unlimited resistance to any individual chemical or combination of chemicals.

For prolonged or repeated handling, use chemical resistant gloves.

Suitable materials for safety gloves (EN 374/EN 16523); Butyl caoutchouc (butyl rubber): thickness >= 0.4 mm; permeation time >= 480 min. NBR (Nitril rubber): thickness >= 0.4 mm; permeation time >= 480 min

The choice of suitable gloves does not only depend on the material, but also on other quality characteristics that vary from one manufacturer to another and on the manner and times according to which the mixture is used.

Respiratory protection:

If workers are exposed to concentrations above the exposure limit they must use appropriate, certified respirators.

Combination filtering device (EN 14387).

Environmental exposure controls:

See point 6.2

Hygienic and Technical measures

See section 7.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State: Liquid

Appearance: Liquid

Color: light yellow

Odour: Characteristic

Odour threshold: N.D.

Melting point/freezing point: N.D.

Boiling point or initial boiling point and boiling range: N.D.

Flammability: Non-flammable; ; Internal assessment

Lower and upper explosion limit: N.D.

Flash point: > 93°C (Internal assessment)

Auto-ignition temperature: N.D.

Decomposition temperature: N.D.

pH: >=10.90<=11.90 (Internal method)

Kinematic viscosity: ≤ 20.5 mm²/s (40 °C)
Density and/or relative density: 1.01 ± 0.01 kg/l (Internal method)
Relative vapour density: N.D.
Vapour pressure: N.D.
Solubility in water: miscible in all ratio
Solubility in oil: No data available
Partition coefficient n-octanol/water (log value): N.A.
Particle characteristics:
Particle size: N.A.

9.2. Other information

Conductivity: N.D.
Explosive properties: N.D.
Oxidizing properties: N.D.
Evaporation rate: N.A.
VOC content % in the product (2010/75/UE) 28.90

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

None.

10.4. Conditions to avoid

Keep away from heat sources.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products

No hazardous decomposition products when stored and handled correctly.
See chapter 5.2

SECTION 11: Toxicological information

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

Information on hazard classes as defined in the retained Regulation (EC) No 1272/2008 (CLP) as amended by UK CLP Regulation, UK SI 2019/720 and UK SI 2020/1567.

Toxicological Information of the Preparation

a) acute toxicity	Not classified
	Based on available data, the classification criteria are not met
b) skin corrosion/irritation	Not classified
	Based on available data, the classification criteria are not met
c) serious eye damage/irritation	The product is classified: Eye Irrit. 2(H319)
d) respiratory or skin sensitisation	The product is classified: Skin Sens. 1(H317)
e) germ cell mutagenicity	Not classified
	Based on available data, the classification criteria are not met
f) carcinogenicity	Not classified
	Based on available data, the classification criteria are not met
g) reproductive toxicity	Not classified
	Based on available data, the classification criteria are not met
h) STOT-single exposure	Not classified
	Based on available data, the classification criteria are not met
i) STOT-repeated exposure	Not classified
	Based on available data, the classification criteria are not met
j) aspiration hazard	Not classified
	Based on available data, the classification criteria are not met

Toxicological information on main components of the mixture:

benzyl alcohol

CAS: 100-51-6	a) acute toxicity	ATE - Oral: 1200 mg/kg bw
		LD50 Oral Rat 1620 mg/kg

potassium oleate

CAS: 143-18-0 a) acute toxicity LD50 Oral Rat > 2000 mg/kg

1-methoxy-2-propanol

CAS: 107-98-2 a) acute toxicity LD50 Oral Rat 4016 mg/kg

LD50 Skin Rat > 2000 mg/kg

LC50 Inhalation Vapour Rat > 7000 ppm 6h

11.2 Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration >= 0.1%

SECTION 12: Ecological information

Adopt good working practices, so that the product is not released into the environment.

12.1. Toxicity

Eco-Toxicological Information:

List of Eco-Toxicological properties of the product

Not classified for environmental hazards.

No data available for the product

List of Eco-Toxicological properties of the components

benzyl alcohol

CAS: 100-51-6 a) Aquatic acute toxicity: LC50 Fish 460 mg/l 96h

a) Aquatic acute toxicity: EC50 Daphnia 230 mg/l 48h

a) Aquatic acute toxicity: EC50 Algae 770 mg/l 72h

b) Aquatic chronic toxicity: NOEC Daphnia 51 mg/l 21d

b) Aquatic chronic toxicity: NOEC Algae 310 mg/l 72h

potassium oleate

CAS: 143-18-0 a) Aquatic acute toxicity: LC50 Fish > 1 mg/l 96h

a) Aquatic acute toxicity: EC50 Crustaceans > 10 mg/l 48h

a) Aquatic acute toxicity: EC50 Algae > 10 mg/l 72h

1-methoxy-2-propanol

CAS: 107-98-2 a) Aquatic acute toxicity: LC50 Fish 6812 mg/l 96h

a) Aquatic acute toxicity: EC50 Daphnia 23300 mg/l 48h

a) Aquatic acute toxicity: EC50 Algae > 1000 mg/l 7d

12.2. Persistence and degradability

benzyl alcohol

CAS: 100-51-6 Readily biodegradable

potassium oleate

CAS: 143-18-0 Readily biodegradable

1-methoxy-2-propanol

CAS: 107-98-2 Readily biodegradable

12.3. Bioaccumulative potential

N.A.

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

No PBT or vPvB substances present in concentration >= 0.1%

12.6 Endocrine disrupting properties

No endocrine disruptor substances present in concentration >= 0.1%

12.7 Other adverse effects

N.A.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover if possible. In so doing, comply with the local and national regulations currently in force.

Do not allow it to enter drains or watercourses.

Dispose of containers contaminated by the product in accordance with local or national legal provisions.

Once the product has expired, it must be disposed of in accordance with current legislation.

SECTION 14: Transport information

Not classified as dangerous in the meaning of transport regulations.

14.1. UN number or ID number

N/A

14.2. UN proper shipping name

ADR-Shipping Name: N/A

IATA-Shipping Name: N/A

IMDG-Shipping Name: N/A

14.3. Transport hazard class(es)

ADR-Class: N/A

IATA-Class: N/A

IMDG-Class: N/A

14.4. Packing group

ADR-Packing Group: N/A

IATA-Packing group: N/A

IMDG-Packing group: N/A

14.5. Environmental hazards

Marine pollutant: No

Environmental Pollutant: No

IMDG-EMS: N/A

14.6. Special precautions for user

Road and Rail (ADR-RID):

ADR exempt:

ADR-Label: N/A

ADR - Hazard identification number: N/A

ADR-Special Provisions: N/A

ADR-Transport category (Tunnel restriction code):

Air (IATA):

IATA-Passenger Aircraft: N/A

IATA-Cargo Aircraft: N/A

IATA-Label: N/A

IATA-Subsidiary hazards: N/A

IATA-Erg: N/A

IATA-Special Provisions: N/A

Sea (IMDG):

IMDG-Stowage and handling: N/A

IMDG-Segregation: N/A

IMDG-Subsidiary hazards: N/A

IMDG-Special Provisions: N/A

14.7. Maritime transport in bulk according to IMO instruments

N.A.

SECTION 15: Regulatory information

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

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Directive 2010/75/EU

Regulation (EC) n. 1907/2006 (REACH)

Regulation (EC) n. 1272/2008 (CLP)

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) n. 2020/878

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)

Regulation (EU) n. 944/2013 (ATP 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)
Regulation (EU) n. 2015/1221 (ATP 7 CLP)
Regulation (EU) n. 2016/918 (ATP 8 CLP)
Regulation (EU) n. 2016/1179 (ATP 9 CLP)
Regulation (EU) n. 2017/776 (ATP 10 CLP)
Regulation (EU) n. 2018/669 (ATP 11 CLP)
Regulation (EU) n. 2018/1480 (ATP 13 CLP)
Regulation (EU) n. 2019/521 (ATP 12 CLP)
Regulation (EU) n. 2020/217 (ATP 14 CLP)
Regulation (EU) n. 2020/1182 (ATP 15 CLP)
Regulation (EU) n. 2021/643 (ATP 16 CLP)
Regulation (EU) n. 2021/849 (ATP 17 CLP)
Regulation (EU) n. 2022/692 (ATP 18 CLP)
Regulation (EU) n. 2023/1434 (ATP 19 CLP)
Regulation (EU) n. 2023/1435 (ATP 20 CLP)
Regulation (EU) n. 2024/197 (ATP 21 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: 3

Restrictions related to the substances contained: 30 (CAS 1589-47-5), 40, 75

Provisions related to directive EU 2012/18 (Seveso III):

None

Regulation (EU) No 649/2012 (PIC regulation)

No substances listed

German Water Hazard Class.

Class 1: slightly hazardous for water.

SVHC Substances:

On the basis of available data, the product does not contain any SVHC in percentage ≥ 0.1%.

Relevant EU provisions transposed through retained EU legislation:
UK REACH List of restrictions (Annex XVII);
UK REACH Candidate list of substances of very high concern (SVHC) for authorisation;
UK REACK List of substances subject to authorisation (Annex XIV);
Export and import of hazardous chemicals - Prior informed consent (PIC regulation).

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Code	Description
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Code	Hazard class and hazard category	Description
2.6/3	Flam. Liq. 3	Flammable liquid, Category 3
3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1
3.4.2/1B	Skin Sens. 1B	Skin Sensitisation, Category 1B
3.8/3	STOT SE 3	Specific target organ toxicity — single exposure, Category 3

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Eye Irrit. 2, H319	Calculation method

Skin Sens. 1, H317	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

Safety data sheets of raw materials suppliers.

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BEI: Biological Exposure Index

CAS: Chemical Abstracts Service (division of the American Chemical Society).

CAV: Poison Center

CE: European Community

CLP: Classification, Labeling, Packaging.

CMR: Carcinogenic, Mutagenic and Reprotoxic

COV: Volatile Organic Compound

CSA: Chemical Safety Assessment

CSR: Chemical Safety Report

DNEL: Derived No Effect Level.

EC50: Half Maximal Effective Concentration

ECHA: European Chemicals Agency

EINECS: European Inventory of Existing Commercial Chemical Substances.

ES: Exposure Scenario

GefStoffVO: Ordinance on Hazardous Substances, Germany.

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

IARC: International Agency for Research on Cancer

IATA: International Air Transport Association.

IC50: half maximal inhibitory concentration

IMDG: International Maritime Code for Dangerous Goods.

LC50: Lethal concentration, for 50 percent of test population.

LD50: Lethal dose, for 50 percent of test population.

LDLo: Leathal Dose Low

N.A.: Not Applicable

N/A: Not Applicable

N/D: Not defined/ Not available

N.D.: Not available

NIOSH: National Institute for Occupational Safety and Health

NOAEL: No Observed Adverse Effect Level

OSHA: Occupational Safety and Health Administration

PBT: Persistent, Bioaccumulative and Toxic

PGK: Packaging Instruction

PNEC: Predicted No Effect Concentration.

PSG: Passengers

RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.

STEL: Short Term Exposure limit.

STOT: Specific Target Organ Toxicity.

TLV: Threshold Limiting Value.

TLV-TWA: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).

vPvB: Very Persistent, Very Bioaccumulative.

WGK: German Water Hazard Class.

Paragraphs modified from the previous revision:

- SECTION 2: Hazards identification
- SECTION 3: Composition/information on ingredients
- SECTION 8: Exposure controls/personal protection
- SECTION 9: Physical and chemical properties

- SECTION 11: Toxicological information
- SECTION 12: Ecological information
- SECTION 16: Other information

1-methoxy-2-propanol

Substance identification
Chemical Name: 1-methoxy-2-propanol
CAS number: 107-98-2
Date - Version: 08/10/2019- 17.0

USE IN COATINGS (USE IN INDUSTRIAL PLANTS).

TITLE SECTION

Short title of the exposure scenario: Use in coatings. (Use in industrial plants).
ERC4; PROC1, PROC7, PROC8a, PROC8b, PROC9

EXPOSURE SCENARIO CONSIDERED - ERC4

Covered use descriptors
ERC4: Industrial use of processing aids not becoming part of articles.

Operating conditions
Yearly amount used in EU: 63,050,000 kg
Daily amount per site: 105,087 kg
Minimum emission days per year: 300
Emission factor to air: 27 %
Emission factor in water: 2 %
Emission factor in soil: 0.1 %
Releases based on A&B tables from TGD 2003
Freshwater dilution factor: 10
Marine water dilution factor: 100

Risk management measures
Treat air emissions to provide a typical removal efficiency of (%). 70 %
Prevent discharge of undissolved substance, or recover from wastewater.
Type of treatment plant: Municipal sewage treatment plant.
Total removal efficiency of the substance from the waste water after risk management measures and treatment in the treatment plant: 87.3 %
Assumed sewage treatment plant flow: 2,000 m³/d

Measures relative to the waste
Dispose of waste cans and containers according to local regulations.

Exposure estimation and reference to its source
Risk Characterization Ratio (RCR): 0,1338
Risk from environmental exposure is driven by fresh water. Risk from environmental exposure is driven by marine water.
Maximum safe use amount: 79,180 kg/day
Risk from environmental exposure is driven by fresh water. Risk from environmental exposure is driven by water.

EXPOSURE SCENARIO CONSIDERED - PROC1

Covered use descriptors
PROC1: Use in closed process, no likelihood of exposure.
Area of use: industrial

Operating conditions
Substance concentration: ≥ 0% - ≤ 100% 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days a week
It is assumed that the use does not exceed 20°C ambient temperature

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 0.04 mg/m³
Risk Characterization Ratio (RCR): 0,0001
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Estimation of exposure 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

EXPOSURE SCENARIO CONSIDERED - PROC7

Covered use descriptors
PROC7: Industrial spray application Spraying (automatic/robotic)
Area of use: industrial

Operating conditions
Substance concentration: ≥ 0% - ≤ 100% 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days a week
It is assumed that the use does not exceed 20°C ambient temperature

Risk management measures
Carry out in a vented booth or extracted enclosure. Effectiveness: 95%

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 46.93 mg/m³
Risk Characterization Ratio (RCR): 0.13
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic.
Exposure estimation: 2.14 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.04

EXPOSURE SCENARIO CONSIDERED - PROC7

Covered use descriptors
PROC7: Industrial spray application Spraying (manual)
Area of use: industrial

Operating conditions
Substance concentration: ≥ 0% - ≤ 100% 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days/week

Risk management measures
Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Effectiveness: 70%
Wear suitable gloves compliant with EN 374. Effectiveness: 80%

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 281.56 mg/m³
Risk Characterization Ratio (RCR): 0.76
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic.
Exposure estimation: 8.57 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.17

EXPOSURE SCENARIO CONSIDERED - PROC8a

Covered use descriptors
PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities. Material transfers. Non-dedicated system.
Area of use: industrial

Operating conditions
Substance concentration: ≥ 0% - ≤ 100% 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.51
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

EXPOSURE SCENARIO CONSIDERED - PROC8b

Covered use descriptors
PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities. Material transfers. Dedicated plant.
Area of use: industrial

Operating conditions
Substance concentration: ≥ 0% - ≤ 100% 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.51
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

EXPOSURE SCENARIO CONSIDERED - PROC9

Covered use descriptors
PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing). Material transfers. Drum/batch transfers. Transfer from containers. Dedicated plant.
Area of use: industrial

Operating conditions
Substance concentration: ≥ 0% - ≤ 100% 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

EXPOSURE SCENARIO CONSIDERED - PROC7

Covered use descriptors
PROC7: Industrial spray application Spraying (automatic/robotic) Spraying (manual)
Area of use: industrial

Operating conditions
Substance concentration: ≥ 0% - ≤ 5% 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature

Risk management measures
Wear suitable gloves compliant with EN 374. Effectiveness: 80%

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.51
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic.
Exposure estimation: 8.57 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.17

EXPOSURE SCENARIO CONSIDERED - PROC7

Covered use descriptors
PROC7: Industrial spray application Spraying (manual)
Area of use: industrial

Operating conditions
Substance concentration: ≥ 0% - ≤ 5% 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature

Risk management measures
Wear suitable gloves compliant with EN 374.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

EXPOSURE SCENARIO CONSIDERED - PROC8a

Covered use descriptors
PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities. Material transfers Non-dedicated system
Area of use: industrial

Operating conditions
Substance concentration: ≥ 0% - < 5% 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1

USE IN COATINGS (USE IN INDUSTRIAL PLANTS).

TITLE SECTION

Short title of the exposure scenario: Use in coatings. (Use in industrial plants).
ERC8a, ERC8d; PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC10, PROC11, PROC13, PROC15, PROC19

EXPOSURE SCENARIO CONSIDERED - ERC8a

Covered use descriptors

ERC8a: Wide dispersive indoor use of processing aids in open systems.

Operating conditions

Yearly amount used in EU: 2,600,000 kgs
Daily amount per site: 433 kg
Minimum emission days per year: 300
Emission factor to air: 80 %
Emission factor in water: 10 %
Emission factor in soil: 0.1 %
Releases based on A&B tables from TGD 2003
Freshwater dilution factor: 10
Marine water dilution factor: 100

Risk management measures

Prevent discharge of undissolved substance, or recover from wastewater.
Type of treatment plant: Municipal sewage treatment plant.
Total removal efficiency of the substance from the waste water after risk management measures and treatment in the treatment plant: 87.3 %
Assumed sewage treatment plant flow: 2,000 m³/d

Measures relative to the waste

Dispose of waste cans and containers according to local regulations.

Exposure estimation and reference to its source

Risk Characterization Ratio (RCR): 0,029
Risk from environmental exposure is driven by fresh water. Risk from environmental exposure is driven by marine water.
Maximum safe use amount: 15,141 kg/day
Risk from environmental exposure is driven by fresh water. Risk from environmental exposure is driven by marine water.

EXPOSURE SCENARIO CONSIDERED - ERC8d

Covered use descriptors

ERC8d: Wide dispersive external use of processing aids in open systems.

Operating conditions

Yearly amount used in EU: 2,600,000 kgs
Daily amount per site: 433 kg
Minimum emission days per year: 300
Emission factor to air: 80 %
Emission factor in water: 10 %
Emission factor in soil: 0.1 %
Releases based on A&B tables from TGD 2003
Freshwater dilution factor: 10
Marine water dilution factor: 100

Risk management measures

Prevent discharge of undissolved substance, or recover from wastewater.
Type of treatment plant: Municipal sewage treatment plant.
Total removal efficiency of the substance from the waste water after risk management measures and treatment in the treatment plant: 87.3 %
Assumed sewage treatment plant flow: 2,000 m³/d

Measures relative to the waste

Dispose of waste cans and containers according to local regulations.

Exposure estimation and reference to its source

Risk Characterization Ratio (RCR): 0.029
Risk from environmental exposure is driven by fresh water. Risk from environmental exposure is driven by marine water.
Maximum safe use amount: 15.141 kg/day
Risk from environmental exposure is driven by fresh water. Risk from environmental exposure is driven by marine water.

EXPOSURE SCENARIO CONSIDERED - PROC1

Covered use descriptors

PROC1: Use in closed process, no likelihood of exposure.
Area of use: professional

Operating conditions

Substance concentration: ≥ 0% - ≤ 100% 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 0.04 mg/m³
Risk Characterization Ratio (RCR): 0.0001
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Estimation of exposure 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

EXPOSURE SCENARIO CONSIDERED - PROC2

Covered use descriptors
PROC2: Use in closed, continuous process with occasional controlled exposure. Filling/Preparation of equipment required for drums and containers.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100% 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Workers - all relevant routes of exposure.
The use has been assessed as safe.

EXPOSURE SCENARIO CONSIDERED - PROC2

Covered use descriptors
PROC2: Use in closed, continuous process with occasional controlled exposure. General exposure. Use in confined systems (closed system). Filling/Preparation of equipment required for drums and containers.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100% 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 75.08 mg/m³
Risk Characterization Ratio (RCR): 0.2
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 1.37 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.03

EXPOSURE SCENARIO CONSIDERED - PROC3

Covered use descriptors
PROC3: Use in batch process (synthesis or formulation): Preparation of material for application
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100% 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 93.85 mg/m³
Risk Characterization Ratio (RCR): 0.25
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

EXPOSURE SCENARIO CONSIDERED - PROC4

Covered use descriptors
PROC4: Use in batch and other processes (synthesis) where opportunity for exposure arises. Film formation. Air drying.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100% 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0,51
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

EXPOSURE SCENARIO CONSIDERED - PROC4

Covered use descriptors
PROC4: Use in batch and other processes (synthesis) where opportunity for exposure arises. Film formation. Air drying.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100% 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days/week
Indoor/Outdoor: Indoor use.
It is assumed that the use does not exceed 20°C ambient temperature

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Workers - all relevant routes of exposure
The use has been assessed as safe.

EXPOSURE SCENARIO CONSIDERED - PROC5

Covered use descriptors
PROC5: Mixing in batch processes for formulation of preparations and articles (multistage and/or significant contact). Preparation of material for application.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100% 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature

Risk management measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour): Effectiveness: 30%
Otherwise, ensure that operations are carried out externally.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 262.79 mg/m³
Risk Characterization Ratio (RCR): 0.71
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic.
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

EXPOSURE SCENARIO CONSIDERED - PROC5

Covered use descriptors
PROC5: Mixing in batch processes for formulation of preparations and articles (multistage and/or significant contact). Preparation of material for application.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100% 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature

Risk management measures
Ensure that operations are carried out externally.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

EXPOSURE SCENARIO CONSIDERED - PROC8a

Covered use descriptors
PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities. Material transfers. Drum/batch transfers. Non-dedicated system.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100% 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Risk management measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Effectiveness: 30%

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 262.79 mg/m³
Risk Characterization Ratio (RCR): 0.71
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0,27

EXPOSURE SCENARIO CONSIDERED - PROC8b

Covered use descriptors
PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities. Material transfers. Drum/batch transfers Dedicated plant.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100% 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.51
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

EXPOSURE SCENARIO CONSIDERED - PROC10

Covered use descriptors
PROC10: Application with rollers or brushes. Roller, spatula, jet application.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100% 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Risk management measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Effectiveness: 30%
Wear suitable gloves compliant with EN 374. Effectiveness: 80%
If there is no general ventilation, ensure that operations are carried out outdoors.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 262.79 mg/m³
Risk Characterization Ratio (RCR): 0.71
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 5.49 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.11

EXPOSURE SCENARIO CONSIDERED - PROC10

Covered use descriptors
PROC10: Application with rollers or brushes Roller, spatula, jet application
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100% 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Risk management measures
Ensure that operations are carried out externally.
Wear suitable gloves compliant with EN 374.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

EXPOSURE SCENARIO CONSIDERED - PROC11

Covered use descriptors
PROC11: Non-industrial spray application. Spraying (manual).
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100% 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
Indoor/Outdoor: Indoor use.
It is assumed that the use does not exceed 20°C ambient temperature.

Risk management measures
Carry out in a vented booth or extracted enclosure. Effectiveness: 80%
Wear a respirator conforming to EN140 with type A filter or better. Effectiveness: 90%

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 2.14 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.04

EXPOSURE SCENARIO CONSIDERED - PROC11

Covered use descriptors
PROC11: Non-industrial spray application. Spraying (manual).
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100% 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Risk management measures
Ensure that operations are carried out externally. Effectiveness: 30%
Wear a respirator conforming to EN140 with type A filter or better. Effectiveness: 90%
Wear suitable gloves compliant with EN 374. Effectiveness: 80%

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 131.4 mg/m³
Risk Characterization Ratio (RCR): 0.36
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 21.43 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.42

EXPOSURE SCENARIO CONSIDERED - PROC13

Covered use descriptors
PROC13: Treatment of articles by dipping, pouring, enamelling.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100% 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Risk management measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Effectiveness: 30%
Otherwise, ensure that operations are carried out externally.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 262.79 mg/m³
Risk Characterization Ratio (RCR): 0.71
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

EXPOSURE SCENARIO CONSIDERED - PROC13

Covered use descriptors
PROC13: Treatment of articles by dipping and pouring.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100% 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Risk management measures
Ensure that operations are carried out externally.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Workers - all relevant routes of exposure.
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

EXPOSURE SCENARIO CONSIDERED - PROC15

Covered use descriptors
PROC15: Use as laboratory reagent. Laboratory activities.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100% 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

EXPOSURE SCENARIO CONSIDERED - PROC19

Covered use descriptors
PROC19: Manual mixing with direct contact using only personal protective equipment. Hand application - fingerpaints, pastels, adhesives.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100% 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Risk management measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Effectiveness: 30%
Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%
If there is no general ventilation, ensure that operations are carried out outdoors.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 262.79 mg/m³
Risk Characterization Ratio (RCR): 0.71
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 14.14 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.28

EXPOSURE SCENARIO CONSIDERED - PROC19

Covered use descriptors
PROC19: Manual mixing with direct contact using only personal protective equipment. Hand application - fingerpaints, pastels, adhesives.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100% 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Risk management measures
Ensure that operations are carried out externally.
Wear chemically resistant gloves in combination with “basic” employee training.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Workers - all relevant routes of exposure.
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

USE IN COATINGS (USE IN INDUSTRIAL PLANTS).

TITLE SECTION

Short title of the exposure scenario: Use in coatings. (Use in industrial plants).
ERC8a, ERC8b; PROC1, PROC2, PROC3, PROC4, PROC5, PROC8a, PROC8b, PROC10, PROC11, PROC13, PROC15, PROC19

EXPOSURE SCENARIO CONSIDERED - ERC8a

Covered use descriptors

ERC8a: Wide dispersive indoor use of processing aids in open systems.

Operating conditions

Yearly amount used in EU: 2,600,000 kgs
Daily amount per site: 433 kg
Minimum emission days per year: 300
Emission factor to air: 80 %
Emission factor in water: 10 %
Emission factor in soil: 0.1 %
Releases based on A&B tables from TGD 2003
Freshwater dilution factor: 10
Marine water dilution factor: 100

Risk management measures

Prevent discharge of undissolved substance, or recover from wastewater.
Type of treatment plant: Municipal sewage treatment plant.
Total removal efficiency of the substance from the waste water after risk management measures and treatment in the treatment plant: 87.3 %
Assumed sewage treatment plant flow: 2,000 m³/d

Measures relative to the waste

Dispose of waste cans and containers according to local regulations.

Exposure estimation and reference to its source

Risk Characterization Ratio (RCR): 0.029
Risk from environmental exposure is driven by fresh water. Risk from environmental exposure is driven by marine water.
Maximum safe use amount: 15.141 kg/day
Risk from environmental exposure is driven by fresh water. Risk from environmental exposure is driven by marine water.

EXPOSURE SCENARIO CONSIDERED - ERC8d

Covered use descriptors

ERC8d: Wide dispersive external use of processing aids in open systems.

Operating conditions

Yearly amount used in EU: 2,600,000 kgs
Daily amount per site: 433 kg
Minimum emission days per year: 300
Emission factor to air: 80 %
Emission factor in water: 10 %
Emission factor in soil: 0.1 %
Releases based on A&B tables from TGD 2003
Freshwater dilution factor: 10
Marine water dilution factor: 100

Risk management measures

Prevent discharge of undissolved substance, or recover from wastewater.
Type of treatment plant: Municipal sewage treatment plant.
Total removal efficiency of the substance from the waste water after risk management measures and treatment in the treatment plant: 87.3 %
Assumed sewage treatment plant flow: 2,000 m³/d

Measures relative to the waste

Dispose of waste cans and containers according to local regulations.

Exposure estimation and reference to its source

Risk Characterization Ratio (RCR): 0.029
Risk from environmental exposure is driven by fresh water. Risk from environmental exposure is driven by marine water.
Maximum safe use amount: 15.141 kg/day
Risk from environmental exposure is driven by fresh water. Risk from environmental exposure is driven by marine water.

EXPOSURE SCENARIO CONSIDERED - PROC1

Covered use descriptors

PROC1: Use in closed process, no likelihood of exposure. General exposure (closed systems)
Area of use: professional

Operating conditions

Substance concentration: ≥ 0% - ≤ 5 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature

Exposure estimation and reference to its source

PROC1
Evaluation method: ESIG GES tool, operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

EXPOSURE SCENARIO CONSIDERED - PROC2

Covered use descriptors

PROC2: Use in closed, continuous process with occasional controlled exposure. Filling/Preparation of equipment required for drums and containers.
Area of use: professional

Operating conditions

Substance concentration: ≥ 0% - ≤ 5 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, operator. Workers - all relevant routes of exposure.
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

EXPOSURE SCENARIO CONSIDERED - PROC2

Covered use descriptors

PROC2: Use in closed, continuous process with occasional controlled exposure. General exposure. Use in confined systems (closed system). Filling/Preparation of equipment required for drums and containers.
Area of use: professional

Operating conditions

Substance concentration: ≥ 0% - ≤ 5 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 15.02 mg/m³
Risk Characterization Ratio (RCR): 0.04
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic.
Exposure estimation: 1.37 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.03

EXPOSURE SCENARIO CONSIDERED - PROC3

Covered use descriptors

PROC3: Use in batch process (synthesis or formulation) Preparation of material for application
Area of use: professional

Operating conditions

Substance concentration: ≥ 0% - ≤ 5 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 18.77 mg/m³
Risk Characterization Ratio (RCR): 0.05
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

EXPOSURE SCENARIO CONSIDERED - PROC4

Covered use descriptors

PROC4: Use in batch and other processes (synthesis) where opportunity for exposure arises. Film formation. Air drying.
Area of use: professional

Operating conditions

Substance concentration: ≥ 0% - ≤ 5 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

EXPOSURE SCENARIO CONSIDERED - PROC4

Covered use descriptors
PROC4: Use in batch and other processes (synthesis) where opportunity for exposure arises. Film formation. Air drying.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 5 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days/week
Indoor/Outdoor: Indoor use.
It is assumed that the use does not exceed 20°C ambient temperature

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

EXPOSURE SCENARIO CONSIDERED - PROC5

Covered use descriptors
PROC5: Mixing in batch processes for formulation of preparations and articles (multistage and/or significant contact). Preparation of material for application.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 5 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 75.08 mg/m³
Risk Characterization Ratio (RCR): 0.2
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic.
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

EXPOSURE SCENARIO CONSIDERED - PROC5

Covered use descriptors
PROC5: Mixing in batch processes for formulation of preparations and articles (multistage and/or significant contact). Preparation of material for application.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 5 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature

Risk management measures
Ensure that operations are carried out externally.

Exposure estimation and reference to its source
PROC5
Evaluation method: ESIG GES tool, operator. Workers - all relevant routes of exposure.
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

EXPOSURE SCENARIO CONSIDERED - PROC8a

Covered use descriptors
PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities. Material transfers. Drum/batch transfers. Non-dedicated system.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 5 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 75.08 mg/m³
Risk Characterization Ratio (RCR): 0.2
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 13,71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

EXPOSURE SCENARIO CONSIDERED - PROC8b

Covered use descriptors
PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities. Material transfers. Drum/batch transfers Dedicated plant.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 5 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 37.54 mg/m³
Risk Characterization Ratio (RCR): 0.1
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

EXPOSURE SCENARIO CONSIDERED - PROC10

Covered use descriptors
PROC10: Application with rollers or brushes. Roller, spatula, jet application.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 5 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 75.08 mg/m³
Risk Characterization Ratio (RCR): 0.2
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 27.43 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.54

EXPOSURE SCENARIO CONSIDERED - PROC10

Covered use descriptors
PROC10: Application with rollers or brushes. Roller, spatula, jet application.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 5 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
Indoor/Outdoor: Outdoor use
It is assumed that the use does not exceed 20°C ambient temperature.

Exposure estimation and reference to its source
PROC10
Evaluation method: ESIG GES tool, operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

EXPOSURE SCENARIO CONSIDERED - PROC11

Covered use descriptors
PROC11: Non-industrial spray application. Spraying (manual).
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 5 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Risk management measures
Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Effectiveness: 30%
Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%
If there is no general ventilation, ensure that operations are carried out outdoors.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 262.79 mg/m³
Risk Characterization Ratio (RCR): 0.71
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 10.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.21

EXPOSURE SCENARIO CONSIDERED - PROC11

Covered use descriptors
PROC11: Non-industrial spray application. Spraying (manual).
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 5 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Risk management measures
Ensure that operations are carried out externally.
Wear chemically resistant gloves in combination with “basic” employee training.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Workers - all relevant routes of exposure.
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

EXPOSURE SCENARIO CONSIDERED - PROC13

Covered use descriptors
PROC13: Treatment of articles by dipping and pouring.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 5 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 75.08 mg/m³
Risk Characterization Ratio (RCR): 0.2
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

EXPOSURE SCENARIO CONSIDERED - PROC13

Covered use descriptors
PROC13: Treatment of articles by dipping and pouring.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 5 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
Indoor/Outdoor: Internal use
It is assumed that the use does not exceed 20°C ambient temperature.

Exposure estimation and reference to its source
PROC13
Evaluation method: ESIG GES tool, operator. Workers - all relevant routes of exposure
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

EXPOSURE SCENARIO CONSIDERED - PROC15

Covered use descriptors
PROC15: Use as a laboratory reagent Laboratory activities
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 5 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 7.51 mg/m³
Risk Characterization Ratio (RCR): 0.02
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

EXPOSURE SCENARIO CONSIDERED - PROC19

Covered use descriptors
PROC19: Manual mixing with direct contact using only personal protective equipment. Hand application, finger paints, crayons, stickers
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 5 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Risk management measures
Wear suitable gloves compliant with EN 374. Effectiveness: 80%

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 75.08 mg/m³
Risk Characterization Ratio (RCR): 0.2
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 28.29 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.56

EXPOSURE SCENARIO CONSIDERED - PROC19

Covered use descriptors
PROC19: Manual mixing with direct contact using only personal protective equipment. Hand application - fingerpaints, pastels, adhesives.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 5 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
Indoor/Outdoor Outdoor use
It is assumed that the use does not exceed 20°C ambient temperature.

Risk management measures
Wear suitable gloves compliant with EN 374.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Workers - all relevant routes of exposure.
If the operating conditions identified and risk management measures are applied, the use has been assessed as safe.

USE IN DETERGENTS (USE IN INDUSTRIAL PLANTS).

TITLE SECTION

Short title of the exposure scenario: Use in detergents. (Use in industrial plants).
ERC8a, ERC8d; PROC2, PROC3, PROC4, PROC8a, PROC8b, PROC10, PROC11, PROC13

EXPOSURE SCENARIO CONSIDERED - ERC8a

Covered use descriptors
ERC8a: Wide dispersive indoor use of processing aids in open systems.

Operating conditions
Yearly amount used in EU: 5,200,000 kg
Daily amount per site: 0.71 kg
Minimum emission days per year: 365
Emission factor to air: 2 %
Emission factor in water: 0.001 %
Emission factor in soil: 0 %
Releases based on information from ESVOC/CEFIC
Freshwater dilution factor: 10
Marine water dilution factor: 100

Risk management measures
Treat air emissions to provide a typical removal efficiency of (%) 70 %
Type of treatment plant: Municipal sewage treatment plant.
Total removal efficiency of the substance from the waste water after risk management measures and treatment in the treatment plant: 87.3 %
Assumed sewage treatment plant flow: 2,000 m³/d

Measures relative to the waste
Dispose of waste cans and containers according to local regulations.

Exposure estimation and reference to its source
Risk Characterization Ratio (RCR): 0.00138
Risk from environmental exposure is driven by marine water.
Maximum safe use amount: 550 kg/day
Risk from environmental exposure is driven by fresh water. Risk from environmental exposure is driven by marine water.

EXPOSURE SCENARIO CONSIDERED - ERC8d

Covered use descriptors
ERC8d: Wide dispersive external use of processing aids in open systems.

Operating conditions
Yearly amount used in EU: 5,200,000 kg
Daily amount per site: 0.71 kg
Minimum emission days per year: 365
Emission factor to air: 2 %
Emission factor in water: 0.001 %
Emission factor in soil: 0 %
Releases based on information from ESVOC/CEFIC
Freshwater dilution factor: 10
Marine water dilution factor: 100
Other factors: Outdoor use.

Risk management measures
Treat air emissions to provide a typical removal efficiency of (%) 70 %
Type of treatment plant: Municipal sewage treatment plant.
Total removal efficiency of the substance from the waste water after risk management measures and treatment in the treatment plant: 87.3 %
Assumed sewage treatment plant flow: 2,000 m³/d

Measures relative to the waste
Dispose of waste cans and containers according to local regulations.

Exposure estimation and reference to its source
Risk Characterization Ratio (RCR): 0.00138
Risk from environmental exposure is driven by marine water.
Maximum safe use amount: 550 kg/day
Risk from environmental exposure is driven by marine water.

EXPOSURE SCENARIO CONSIDERED - PROC2

Covered use descriptors
PROC2: Use in closed, continuous process with occasional controlled exposure. Automated process with (semi) closed systems. Use in contained systems.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 75.08 mg/m³
Risk Characterization Ratio (RCR): 0,2
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 1.37 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.03

EXPOSURE SCENARIO CONSIDERED - PROC3

Covered use descriptors
PROC3: Use in batch process (synthesis or formulation). Use in contained systems. Drum/batch transfers. Automated process with (semi) closed systems.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 93.85 mg/m³
Risk Characterization Ratio (RCR): 0.25
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 0.34 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.01

EXPOSURE SCENARIO CONSIDERED - PROC4

Covered use descriptors
PROC4: Use in batch and other processes (synthesis) where opportunity for exposure arises. Semi-automatic process. Application of cleaning products in closed systems. Cleaning of medical devices.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0,51
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

EXPOSURE SCENARIO CONSIDERED - PROC4

Covered use descriptors
PROC4: Use in batch and other processes (synthesis) where opportunity for exposure arises. Application of cleaning products in closed systems.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Workers - all relevant routes of exposure.
The use has been assessed as safe.

EXPOSURE SCENARIO CONSIDERED - PROC4

Covered use descriptors
PROC4: Use in batch and other processes (synthesis) where opportunity for exposure arises. Cleaning of medical devices.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility.
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Exposure estimation and reference to its source
PROC4
Evaluation method: ESIG GES tool, operator. Workers - all relevant routes of exposure.
The use has been assessed as safe.

EXPOSURE SCENARIO CONSIDERED - PROC8a

Covered use descriptors
PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities. Filling/Preparation of equipment required for drums and containers. Non-dedicated system.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 240 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Risk management measures
Ensure that operations are carried out externally. Effectiveness: 30%

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 157.68 mg/m³
Risk Characterization Ratio (RCR): 0.43
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

EXPOSURE SCENARIO CONSIDERED - PROC8b

Covered use descriptors
PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities. Filling/Preparation of equipment required for drums and containers. Dedicated plant.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 187.71 mg/m³
Risk Characterization Ratio (RCR): 0.51
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 6.86 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.14

EXPOSURE SCENARIO CONSIDERED - PROC10

Covered use descriptors
PROC10: Application with rollers or brushes. Low pressure cleaning with detergents.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤100 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Risk management measures
Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Effectiveness: 70%

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 112.63 mg/m³
Risk Characterization Ratio (RCR): 0.31
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 27.43 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.54

EXPOSURE SCENARIO CONSIDERED - PROC10

Covered use descriptors
PROC10: Application with rollers or brushes. Surface cleaning (manual) by fogging.
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Risk management measures
Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Effectiveness: 30%
Wear suitable gloves compliant with EN 374. Effectiveness: 80%

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 262.79 mg/m³
Risk Characterization Ratio (RCR): 0.71
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 5.49 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.11

EXPOSURE SCENARIO CONSIDERED - PROC10

Covered use descriptors
PROC10: Application with rollers or brushes. Manual application by fogging, dipping etc. Rolling/brushing
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 100 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Risk management measures
Provide extract ventilation in points where emissions occur (LEV). Effectiveness: 80%

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 75.08 mg/m³
Risk Characterization Ratio (RCR): 0.2
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 27.43 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.54

EXPOSURE SCENARIO CONSIDERED - PROC11

Covered use descriptors
PROC11: Non-industrial spray application. Cleaning with high pressure washers
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 5 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
Indoor/Outdoor Internal use
It is assumed that the use does not exceed 20°C ambient temperature.

Risk management measures
Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Effectiveness: 70%
Wear suitable gloves compliant with EN 374. Effectiveness: 80%

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 112.63 mg/m³
Risk Characterization Ratio (RCR): 0.31
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 21.43 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.42

EXPOSURE SCENARIO CONSIDERED - PROC11

Covered use descriptors
PROC11: Non-industrial spray application. Cleaning with high pressure washers
Area of use: professional

Operating conditions
Substance concentration: ≥ 0% - ≤ 5 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Risk management measures
Ensure that operations are carried out externally. Effectiveness: 30%
Wear chemically resistant gloves in combination with “basic” employee training. Effectiveness: 90%

Exposure estimation and reference to its source
Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 262.79 mg/m³
Risk Characterization Ratio (RCR): 0.71
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 10.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.21

EXPOSURE SCENARIO CONSIDERED - PROC13

Covered use descriptors

PROC13: Treatment of articles by dipping and pouring. Surface cleaning (manual). Enamelling, dipping and pouring.
Area of use: professional

Operating conditions

Substance concentration: ≥ 0% - ≤ 100 % 1-methoxy-2-propanol
Physical state: liquid, medium volatility
Duration and frequency of application: 480 mins. 5 days/week
It is assumed that the use does not exceed 20°C ambient temperature.

Risk management measures

Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Effectiveness: 70%

Exposure estimation and reference to its source

Evaluation method: ESIG GES tool, operator. Worker - inhalation, long-term - systemic
Exposure estimation: 112.63 mg/m³
Risk Characterization Ratio (RCR): 0.31
Evaluation method: ESIG GES tool, operator. Worker - dermal, long term - systemic
Exposure estimation: 13.71 mg/kg/day (body weight)
Risk Characterization Ratio (RCR): 0.27

Benzyl alcohol

Substance identification
Chemical Name: Benzyl alcohol
CAS number: 100-51-6
Date: 07/12/2012

INDUSTRIAL USE

Exposure scenario for industrial use in adhesives, sealants, coatings and paints, fillers, finger paints, metallic and non-metallic surface treatment products, inks and toners (PC1, PC9a, PC9b, PC9c, PC14, PC15 , PC18)

1. TITLE

Systematic title based on the use descriptor: SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

Processes, activities covered:

Mixing or dilution in batch processes
Processing by compression/pelletisation, calendering or use during foam production
Transfer operations from/to large or small containers
Treatment of objects by brush/roller application, spraying or immersion/pouring
Lubrication at high energy conditions
Use as a laboratory agent
Handling of substances bound in materials/articles

Evaluation method:

ECETOC TRA (April 2010), EUSES (v.2.1)

2. OPERATING CONDITIONS AND RISK MANAGEMENT MEASURES

Process categories for human health and environmental release categories for exposure assessment:
PC1: PROC5, 7, 8a, 8b, 9, 10, 12, 13, 14 spERC ESVOC 5 (related to ERC4)
PC9a/b/c: PROC5, 7, 8a, 8b, 9, 10, 13 spERC ESVOC 5 (related to ERC4)
PC14: PROC5, 8a, 8b, 9, 15, 23, 24, 25 spERC ESVOC 5 (related to ERC4)
PC15: PROC5, 8a, 8b, 9, 15 spERC ESVOC 5 (related to ERC4)
PC18: PROC7, 8a, 8b, 9, 10, 13 spERC ESVOC 5 (related to ERC4)

2.1 EXPOSURE SCENARIO CONTROLLING WORKER EXPOSURE FOR PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC12, PROC13, PROC14, PROC15

Product features

Concentration ≤ 40%
Physical state: liquid

Quantity used

Not applicable

Frequency and duration of use/exposure

Duration of exposure per day: 8h (full shift, indoors)
Duration of exposure per year: 230 days

Human factors not influenced by risk management

Breathing volume in the conditions of use: 10 m³/8h-day (light activity)
Body weight: 70kg (worker)

Other operational conditions affecting worker exposure

Internal use
Use at room temperature

Technical conditions and measures to control dispersion from source to the worker
Local vapor ventilation (efficiency > 90 %) or other adequate ventilation required

Organizational measures to prevent/limit releases, dispersion and exposure
Only properly trained and authorized personnel can handle the substance. Substance handling procedures must be well documented and controlled.

Conditions and measures related to personal protection, hygiene and health evaluation
PROC7:
Respiratory protection recommended (95% efficiency) as described in section 8.
Wear safety goggles as described in section 8.
Wear protective clothing as described in section 8.

2.2 EXPOSURE SCENARIO CONTROLLING WORKER EXPOSURE FOR PROC23, PROC24, PROC25

Product features
Concentration ≤ 40%
Physical state: liquid

Quantity used
Not applicable

Frequency and duration of use/exposure
Duration of exposure per day: 8h (full shift, indoors and outdoors)
Duration of exposure per year: 230 days

Human factors not influenced by risk management
Breathing volume in the conditions of use: 10 m³/8h-day (light activity)
Body weight: 70kg (worker)

Other operational conditions affecting worker exposure
Indoor use.
Use at room temperature

Technical conditions and measures to control dispersion from source to the worker
Local vapor ventilation (efficiency > 90 %) or other adequate ventilation required.

Organizational measures to prevent/limit releases, dispersion and exposure
Only properly trained and authorized personnel can handle the substance. Substance handling procedures must be well documented and controlled.

Conditions and measures related to personal protection, hygiene and health evaluation
Wear safety goggles as described in section 8.
Wear protective clothing as described in section 8.

2.3 EXPOSURE SCENARIO CONTROLLING ENVIRONMENTAL EXPOSURE FOR SPERC ESVOC 5 - RELATED TO ERC4

Product features
Not relevant

Quantity used
Number of sites: > 1
Yearly amount used in the region: PC 1, 9a, 9b, 9c, 14, 15, 18: 412 to: 570 to (10 % rule applies)

Frequency and duration of use
spERC ESVOC 5 (related to ERC4): 300 days/year

Environmental factors not influenced by risk management
Local fresh water dilution factor: 10
Receiving surface water flow: 18,000 m³/d
Local seawater dilution factor 100

Other operational conditions affecting environmental exposure
Indoor and outdoor use

Technical conditions and measures at process level (source) to prevent release
spERC ESVOC 5 (related to ERC4):
Fraction of tonnage released to air: 9,8 %
Fraction of tonnage released to wastewater: 2 %
Fraction of tonnage released into industrial ground: 0 %

Local technical conditions and measures to reduce and limit discharges, atmospheric emissions and soil release
Waste water must be sent to a dedicated treatment plant or treated with other suitable techniques. Floors should be waterproof and resistant to liquids.

Organizational measures to prevent/limit release from site
Only properly trained and authorized personnel can handle the substance. Substance handling procedures must be well documented and controlled.

Conditions and measures for the domestic sewage treatment plant
Dimensions of wastewater treatment plant: 2000 m^3/d (removal rate: 87.4 %)

Conditions and measures for external treatment of waste for disposal
No specific measures. For general conditions and measures, see section 13.

Conditions and measures for external recovery of waste
No specific measures. For general conditions and measures, see section 13.

3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

Workers

Exposure assessment (human):
ECETOC TRA model (April 2010 version). Dermal exposure estimates of ECETOC TRA have been corrected for concentration.

Exposure estimation:
Individual and combined (skin and inhalation) exposure values are below the DNELs (RCR ratios < 1).

Environment

Exposure assessment (environment):
EUSES 2.1: ERC4 modified with ESVOC 5 (ESVOC SPERC 4.3a.v1)

Exposure estimation:
The predicted exposure concentrations for air, water and soil are lower than the derived PNECs, giving an RCR < 1.

4. GUIDANCE FOR DOWNSTREAM USERS TO ASSESS WHETHER THEY COMPLY WITH THE LIMITS SET BY THE EXPOSURE SCENARIO

Environment:
Under the conditions listed above the process is considered safe. Direct release to water and soil should be avoided, air emissions should be minimised. Other conditions should be considered only when adequate measurements or calculations demonstrate that the RCR remains < 1.

Health:
Under the conditions listed above the process is considered safe. Other conditions should be considered only when adequate measurements or calculations demonstrate that the RCR remains < 1.

Further good practice advice beyond the REACH CSA
Environment: Not applicable
Health: On possible contact with the product (sampling, use, spills, product leaks, cleaning): wear protective clothing. Wear protective gloves and safety goggles. See section 8 for information on appropriate personal protective equipment.

PROFESSIONAL USE

Exposure scenario for professional uses of benzyl alcohol consisting of mixing/ loading and charging/discharging, roller, brush, spray or dip application (PC0, PC1, PC09a, 9b, 9c, PC14, PC15, PC18, PC21, PC26, PC31, PC32).

1. TITLE

Systematic title based on the use descriptor: SU22 - Professional uses: Generalized use

Processes, activities covered:

Mixing or dilution in batch processes BY HAND
Transfer operations from/to large or small containers
Treatment of objects by brush/roller application, spraying or immersion/pouring
Hand mixing with intimate contact and only PSD available
Handling of substances bound in materials/articles

Evaluation method:

ECETOC TRA (April 2010), EUSES (v.2.1)

2. OPERATING CONDITIONS AND RISK MANAGEMENT MEASURES

Process categories for human health and environmental release categories for exposure assessment:
PC0: PROC5, 8a, 8b, 9, 10, 11, 13, 19 - ERC8a, 8d
PC1: PROC5, 8a, 8b, 9, 10, 11, 13, 19 - ERC8a, 8d
PC9a, 9b, 9c: PROC5, 8a, 8b, 9, 10, 11, 13, 19 - ERC8a, 8d
PC14: PROC8a, 8b, 9, 10, 11, 13, 19, 23, 24, 25 - ERC8a, 8d
PC15: PROC8a, 8b, 9, 10, 11, 13, 19 - ERC8a, 8d
PC18: PROC5, 8a, 8b, 10, 11, 13, 19 - ERC8a, 8d
PC21: PROC8a, 8b, 15 - ERC8a, 8d
PC26: PROC5, 6, 8a, 8b, 11, 13, 14, 19, 21 - ERC8a, 8d
PC30: PROC8a, 8b - ERC8a, 8d
PC31: PROC8b, 10, 11 - ERC8a, 8d
PC32: PROC8a, 8b, 9, 10, 11 - ERC8a, 8d

Number of sites: > 1

2.1 EXPOSURE SCENARIO CONTROLLING WORKER EXPOSURE FOR PROC5, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC12, PROC13, PROC14, PROC15

Product features

Concentration ≤ 40%
Physical state: liquid

Quantity used

Not applicable

Frequency and duration of use/exposure

Duration of exposure per day: 8h (full shift, indoors and outdoors)
Duration of exposure per year: 230 days

Human factors not influenced by risk management

Breathing volume in the conditions of use: 10 m^3/8h-day (light activity)
Body weight: 70kg (worker)

Other operational conditions affecting worker exposure

Internal use
Use at room temperature

Technical conditions and measures to control dispersion from source to the worker

No special measures are required.

Organizational measures to prevent/limit releases, dispersion and exposure
Only properly trained and authorized personnel can handle the substance. Substance handling procedures must be well documented and controlled.

Conditions and measures related to personal protection, hygiene and health evaluation
Personal protection:
PROC8b, PROC9, PROC14, PROC15: concentration ≤ 40 %: no RMM required.
PROC5, PROC8a, PROC13: > 25 % - ≤ 40 %: gloves (90 % efficiency) are required as described in section 8.
PROC6: > 5 % - ≤ 40 %: gloves (90 % efficiency) are required as described in section 8.
PROC10: < 5 % (indoor and outdoor environment): No RMMs required.
> 5 - ≤ 40 % (indoor and outdoor environment): gloves (90 % efficiency) are required as described in point 8.

Wear safety goggles as described in section 8.
Wear protective clothing as described in section 8.

2.2 EXPOSURE SCENARIO CONTROLLING WORKER EXPOSURE FOR PROC11

Product features
Concentration ≤ 40%
Physical state: liquid

Quantity used
Not applicable

Frequency and duration of use/exposure
Duration of exposure per day: 8h (full shift, indoors and outdoors)
Duration of exposure per year: 230 days

Human factors not influenced by risk management
Breathing volume in the conditions of use: 10 m³/8h-day (light activity)
Body weight: 70kg (worker)

Other operational conditions affecting worker exposure
Indoor and outdoor use
Use at room temperature

Technical conditions and measures to control dispersion from source to the worker
No special measures are required.

Organizational measures to prevent/limit releases, dispersion and exposure
Only properly trained and authorized personnel can handle the substance. Substance handling procedures must be well documented and controlled.

Conditions and measures related to personal protection, hygiene and health evaluation
Personal protection:
≤ 5 % (indoor and outdoor environment): Respiratory protection (95 % efficiency) required as described in section 8.
> 5 % ≤ 40 % (indoor and outdoor environment): Respiratory protection (95 % efficiency) and gloves (90 % efficiency) required as described in section 8.
Wear safety goggles as described in section 8.
Wear protective clothing as described in section 8.

2.3 EXPOSURE SCENARIO CONTROLLING WORKER EXPOSURE FOR PROC19

Product features
Concentration ≤ 40%
Physical state: liquid

Quantity used
Not applicable

Frequency and duration of use/exposure
Duration of exposure per day (concentration ≤ 25 %): 8 hours (indoors and outdoors)
Duration of exposure per day (concentration >25% ≤40%): 4 hours (indoors and outdoors)
Duration of exposure per year: 230 days

Human factors not influenced by risk management
Breathing volume in the conditions of use: 10 m³/8h-day (light activity)
Body weight: 70kg (worker)

Other operational conditions affecting worker exposure
Indoor and outdoor use
Use at room temperature

Technical conditions and measures to control dispersion from source to the worker
No special measures are required.

Organizational measures to prevent/limit releases, dispersion and exposure
Only properly trained and authorized personnel can handle the substance. Substance handling procedures must be well documented and controlled.

Conditions and measures related to personal protection, hygiene and health evaluation
Personal protection:
> 1 % (indoor): gloves (90 % efficiency) are required as described in section 8.
> 5% - 40% (outdoors): gloves (90 % efficiency) are required as described in section 8.
Wear safety goggles as described in section 8.
Wear protective clothing as described in section 8.

2.4 EXPOSURE SCENARIO CONTROLLING ENVIRONMENTAL EXPOSURE FOR ERC8a, ERC8d

Product features
Not relevant

Quantity used
Yearly amount used in the region: the 10% rule applies
ERC8a PC0, 1, 9a, 9b, 9c, 14, 15, 18, 21, 26, 30, 31, 32, 34, 35: 1,785t
ERC8d PC0, 1, 9a, 9b, 9c, 14, 15, 18, 21, 26, 31, 32, 34, 35: 1,775t
Fraction of main local source: 0.002 (default)
Issue days per site: 365 days/year (default)

Frequency and duration of use
Continuous release: 365 days/year

Environmental factors not influenced by risk management
Local fresh water dilution factor: 10
Receiving surface water flow: 18,000 m³/d
Local seawater dilution factor local: 100

Other operational conditions affecting environmental exposure
Indoor / outdoor environment

Technical conditions and measures at process level (source) to prevent release
No special measures are required.

Local technical conditions and measures to reduce and limit discharges, atmospheric emissions and soil release
Waste water must be sent to a dedicated treatment plant or treated with other suitable techniques.

Organizational measures to prevent release from site
Only properly trained and authorized personnel can handle the substance. Substance handling procedures must be well documented and controlled.

Conditions and measures for the domestic sewage treatment plant
Dimensions of wastewater treatment plant: 2000 m³/d (removal rate: 87.4 %)

Conditions and measures for external treatment of waste for disposal
No specific measures. For general conditions and measures, see section 13.

Conditions and measures for external recovery of waste
No specific measures. For general conditions and measures, see section 13.

3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

Workers

PROC5, PROC6, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC14, PROC15, PROC19

Exposure assessment (human):

PROC5, PROC6, PROC8b, PROC9, PROC11, PROC13, PROC14, PROC15

ECETOC TRA model (April 2010 version). Dermal exposure estimates of ECETOC TRA have been linearly corrected for concentration.

PROC8a, PROC10

ECETOC TRA model (April 2010 version). Dermal exposure estimates of ECETOC TRA have been linearly corrected for concentration. Local and systemic exposure via inhalation of ECETOC TRA has been linearly scaled based on the concentration.

PROC19

ECETOC TRA model (April 2010 version). The dermal exposure estimates of ECETOC TRA have been linearly corrected for the concentration and according to the EMFs of CEFIC for the duration of exposure. Local exposure via inhalation of ECETOC TRA has been linearly scaled based on the concentration and in accordance with the CEFIC EMFs for the duration of exposure. Systemic exposure via inhalation has been linearly scaled for the duration of exposure.

Exposure estimation:

Individual and combined (skin and inhalation) exposure values are below the DNELs (RCR ratios < 1).

Environment

ERC8a, ERC8d

Exposure assessment (environment):

EUSES 2.1.

Exposure estimation:

The predicted exposure concentrations for air, water and soil are lower than the derived PNECs, giving an RCR < 1.

4. GUIDANCE FOR DOWNSTREAM USERS TO ASSESS WHETHER THEY COMPLY WITH THE LIMITS SET BY THE EXPOSURE SCENARIO

Environment:

Under the conditions listed above the process is considered safe. Direct release to water and soil should be avoided, air emissions should be minimised. Other conditions should be considered only when adequate measurements or calculations demonstrate that the RCR remains < 1.

Health:

Under the conditions listed above the process is considered safe. Other conditions should be considered only when adequate measurements or calculations demonstrate that the RCR remains < 1.

Further good practice advice beyond the REACH CSA

Environment: Not applicable

Health: On possible contact with the product (sampling, use, spills, product leaks, cleaning): wear protective clothing. Wear protective gloves and safety goggles. See section 8 for information on appropriate personal protective equipment.

PROFESSIONAL USE

Exposure scenario for professional use in photochemicals (PC30)

1. TITLE

Systematic title based on the use descriptor: SU22 - Professional uses: Generalized use

Processes, activities covered:

Transfer operations from/to large or small containers

Evaluation method:

ECETOC TRA (April 2010), EUSES (v.2.1)

2. OPERATING CONDITIONS AND RISK MANAGEMENT MEASURES

Human Health Exposure/Environmental Exposure:
PC30: PROC8a, 8b - ERC8a, 8d

Number of sites: > 1

2.1 EXPOSURE SCENARIO CONTROLLING WORKER EXPOSURE FOR PROC8a E PROC8b

Product features

Concentration ≤ 40%
Physical state: liquid

Quantity used

Not applicable

Frequency and duration of use/exposure

Duration of exposure per day: 8h (full shift, indoors and outdoors)
Duration of exposure per year: 230 days

Human factors not influenced by risk management

Breathing volume in the conditions of use: 10 m^3/8h-day (light activity)
Body weight: 70kg (worker)

Other operational conditions affecting worker exposure

Internal use
Use at room temperature

Technical conditions and measures to control dispersion from source to the worker

No special measures are required.

Organizational measures to prevent/limit releases, dispersion and exposure

Only properly trained and authorized personnel can handle the substance. Substance handling procedures must be well documented and controlled.

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

Personal protection:
PROC8b: concentration ≤ 40 %: no RMM required.
PROC8a: > 25 % - ≤ 40 %: gloves (90 % efficiency) are required as described in section 8.

Wear safety goggles as described in section 8.
Wear protective clothing as described in section 8.

2.2 EXPOSURE SCENARIO CONTROLLING ENVIRONMENTAL EXPOSURE FOR ERC8a, ERC8b

Product features
Not relevant

Quantity used
Yearly amount used in the region: the 10% rule applies
ERC8a PC30: 1.785 t
ERC8d PC30: 190 t
Fraction of main local source: 0.002 (default)
Issue days per site: 365 days/year (default)

Frequency and duration of use
Continuous release: 365 days/year

Environmental factors not influenced by risk management
Local fresh water dilution factor: 10
Receiving surface water flow: 18,000 m³/d
Local seawater dilution factor local: 100

Other operational conditions affecting environmental exposure
No special measures are required.

Technical conditions and measures at process level (source) to prevent release
No special measures are required.

Local technical conditions and measures to reduce and limit discharges, atmospheric emissions and soil release
Waste water must be sent to a dedicated treatment plant or treated with other suitable techniques.

Organizational measures to prevent release from site
Only properly trained and authorized personnel can handle the substance. Substance handling procedures must be well documented and controlled.

Conditions and measures for the domestic sewage treatment plant
Dimensions of wastewater treatment plant: 2000 m³/d (removal rate: 87.4 %)

Conditions and measures for external treatment of waste for disposal
No specific measures. For general conditions and measures, see section 13.

Conditions and measures for external recovery of waste
No specific measures. For general conditions and measures, see section 13.

3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

Workers
PROC8a, PROC8b

Exposure assessment (human):
PROC8a
ECETOC TRA model (April 2010 version). Dermal exposure estimates of ECETOC TRA have been linearly corrected for concentration. Local and systemic exposure via inhalation of ECETOC TRA has been linearly scaled based on the concentration.

PROC8b
ECETOC TRA model (April 2010 version). Dermal exposure estimates of ECETOC TRA have been linearly corrected for concentration.

Exposure estimation:
Individual and combined (skin and inhalation) exposure values are below the DNELs (RCR ratios < 1).

Environment
ERC8a, ERC8b

Exposure assessment (environment):
EUSES 2.1.

Exposure estimation:
The predicted exposure concentrations for air, water and soil are lower than the derived PNECs, giving an RCR < 1.

4. GUIDANCE FOR DOWNSTREAM USERS TO ASSESS WHETHER THEY COMPLY WITH THE LIMITS SET BY THE EXPOSURE SCENARIO

Environment:
Under the conditions listed above the process is considered safe. Direct release to water and soil should be avoided, air emissions should be minimised. Other conditions should be considered only when adequate measurements or calculations demonstrate that the RCR remains < 1.

Health:
Under the conditions listed above the process is considered safe. Other conditions should be considered only when adequate measurements or calculations demonstrate that the RCR remains < 1.

Further good practice advice beyond the REACH CSA
Environment: Not applicable
Health: On possible contact with the product (sampling, use, spills, product leaks, cleaning): wear protective clothing. Wear protective gloves and safety goggles. See section 8 for information on appropriate personal protective equipment.

PROFESSIONAL USE

Exposure scenario for professional use in washing and cleaning products, cosmetics and personal care products (PC35, PC39)

1. TITLE

Systematic title based on the use descriptor: SU22 - Professional uses: Generalized use

Processes, activities covered:

Transfer operations from/to large or small containers
Treatment of objects by roller/brush, spray or dip/pour application
Mixing or dilution in batch processes or by hand

Evaluation method:

ECETOC TRA (April 2010), EUSES (v.2.1)

2. OPERATING CONDITIONS AND RISK MANAGEMENT MEASURES

Human Health Exposure/Environmental Exposure:
PC35: PROC8a, 8b, 9, 10, 11, 13, 19 - ERC8a, 8b, 8d, 8e
PC39: PROC13 - ERC8a, 8b, 8d, 8e

Number of sites: > 1

2.1 EXPOSURE SCENARIO CONTROLLING WORKER EXPOSURE FOR PROC8a, PROC8b, PROC9, PROC10, PROC13

Product features

Concentration ≤ 40%
Physical state: liquid

Quantity used

Not applicable

Frequency and duration of use/exposure

Duration of exposure per day: 8h (full shift, indoors and outdoors)
Duration of exposure per year: 230 days

Human factors not influenced by risk management

Breathing volume in the conditions of use: 10 m³/8h-day (light activity)
Body weight: 70kg (worker)

Other operational conditions affecting worker exposure

Internal use
Use at room temperature

Technical conditions and measures to control dispersion from source to the worker

No special measures are required.

Organizational measures to prevent/limit releases, dispersion and exposure

Only properly trained and authorized personnel can handle the substance. Substance handling procedures must be well documented and controlled.

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

Personal protection:
PROC8b, PROC9: concentration ≤ 40 %: no RMM required.
PROC8a, PROC13: > 25 % - ≤ 40 %: gloves (90 % efficiency) are required as described in section 8.
PROC10: < 5 % (indoor and outdoor environment): No RMMs required
> 5 - ≤ 40 % (indoor and outdoor environment): gloves (90 % efficiency) are required as described in section 8.

Wear safety goggles as described in section 8.
Wear protective clothing as described in section 8.

2.2 EXPOSURE SCENARIO CONTROLLING WORKER EXPOSURE FOR PROC11

Product features
Concentration ≤ 40%
Physical state: liquid

Quantity used
Not applicable

Frequency and duration of use/exposure
Duration of exposure per day: 8h (full shift, indoors and outdoors)
Duration of exposure per year: 230 days

Human factors not influenced by risk management
Breathing volume in the conditions of use: 10 m³/8h-day (light activity)
Body weight: 70kg (worker)

Other operational conditions affecting worker exposure
Internal use
Use at room temperature

Technical conditions and measures to control dispersion from source to the worker
No special measures are required.

Organizational measures to prevent/limit releases, dispersion and exposure
Only properly trained and authorized personnel can handle the substance. Substance handling procedures must be well documented and controlled.

Conditions and measures related to personal protection, hygiene and health evaluation
Personal protection:
≤ 5 % (indoor and outdoor environment): Respiratory protection (95 % efficiency) required as described in section 8.
> 5 % - ≤ 40 % (indoor and outdoor environment): Respiratory protection (95 % efficiency) and gloves (90 % efficiency) required as described in section 8.

Wear safety goggles as described in section 8.
Wear protective clothing as described in section 8.

2.3 EXPOSURE SCENARIO CONTROLLING WORKER EXPOSURE FOR PROC19

Product features
Concentration ≤ 40%
Physical state: liquid

Quantity used
Not applicable

Frequency and duration of use/exposure
Duration of exposure per day (concentration ≤ 25 %): 8 h (indoor and outdoor)
Duration of exposure per day (concentration >25% - ≤40%): 4 hours (indoors and outdoors)
Duration of exposure per year: 230 days

Human factors not influenced by risk management
Breathing volume in the conditions of use: 10 m³/8h-day (light activity)
Body weight: 70kg (worker)

Other operational conditions affecting worker exposure
Internal use
Use at room temperature

Technical conditions and measures to control dispersion from source to the worker
No special measures are required.

Organizational measures to prevent/limit releases, dispersion and exposure
Only properly trained and authorized personnel can handle the substance. Substance handling procedures must be well documented and controlled.

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

Personal protection:
> 1 % (indoor): gloves (90 % efficiency) are required as described in section 8.
> 5% - 40% (outdoors): gloves (90 % efficiency) are required as described in section 8..

Wear safety goggles as described in section 8.
Wear protective clothing as described in section 8.

2.4 EXPOSURE SCENARIO CONTROLLING ENVIRONMENTAL EXPOSURE FOR ERC8a, ERC8b, ERC8d, ERC8e

Product features

Not relevant

Quantity used

Yearly amount used in the region: the 10% rule applies
ERC8a PC35/PC39: 1,785 t
ERC8b PC35/PC39: 190 t
ERC8d PC35/PC39: 1,775 t
ERC8e PC35/PC39: 190 t
Fraction of main local source: 0.002 (default)
Issue days per site: 365 days/year (default)

Frequency and duration of use

Continuous release: 365 days/year

Environmental factors not influenced by risk management

Local fresh water dilution factor: 10
Receiving surface water flow: 18,000 m³/d
Local seawater dilution factor local: 100

Other operational conditions affecting environmental exposure

No special measures are required.

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

No special measures are required.

Local technical conditions and measures to reduce and limit discharges, atmospheric emissions and soil release

Waste water must be sent to a dedicated treatment plant or treated with other suitable techniques.

Organizational measures to prevent release from site

Only properly trained and authorized personnel can handle the substance. Substance handling procedures must be well documented and controlled.

Conditions and measures for the domestic sewage treatment plant

Dimensions of wastewater treatment plant: 2000 m³/d (removal rate: 87.4 %)

Conditions and measures for external treatment of waste for disposal

No specific measures. For general conditions and measures, see section 13.

Conditions and measures for external recovery of waste

No specific measures. For general conditions and measures, see section 13.

3. EXPOSURE ESTIMATION AND REFERENCE TO ITS SOURCE

Workers

Exposure assessment (human):

PROC8b, PROC9, PROC11, PROC13

ECETOC TRA model (April 2010 version). Dermal exposure estimates of ECETOC TRA have been corrected for concentration.

PROC8a, PROC10

ECETOC TRA model (April 2010 version). Dermal exposure estimates of ECETOC TRA have been linearly corrected for concentration. Local and systemic exposure via inhalation of ECETOC TRA has been linearly scaled based on the concentration.

PROC19

ECETOC TRA model (April 2010 version). The dermal exposure estimates of ECETOC TRA have been linearly corrected for the concentration and according to the EMFs of CEFIC for the duration of exposure. Local exposure via inhalation of ECETOC TRA has been linearly scaled based on the concentration and in accordance with the CEFIC EMFs for the duration of exposure. Systemic exposure via inhalation has been linearly scaled for the duration of exposure.

Exposure estimation:

Individual and combined (skin and inhalation) exposure values are below the DNELs (RCR ratios < 1).

Environment

ERC8a, ERC8b, ERC8d, ERC8e

Exposure assessment (environment):

EUSES 2.1.

Exposure estimation:

The predicted exposure concentrations for air, water and soil are lower than the derived PNECs, giving an RCR < 1.

4. GUIDANCE FOR DOWNSTREAM USERS TO ASSESS WHETHER THEY COMPLY WITH THE LIMITS SET BY THE EXPOSURE SCENARIO

Environment:

Under the conditions listed above the process is considered safe. Direct release to water and soil should be avoided, air emissions should be minimised. Other conditions should be considered only when adequate measurements or calculations demonstrate that the RCR remains < 1.

Health:

Under the conditions listed above the process is considered safe. Other conditions should be considered only when adequate measurements or calculations demonstrate that the RCR remains < 1.

Further good practice advice beyond the REACH CSA

Environment: Not applicable

Health: On possible contact with the product (sampling, use, spills, product leaks, cleaning): wear protective clothing. Wear protective gloves and safety goggles. See section 8 for information on appropriate personal protective equipment.